1122 eMARS Business Objects Desktop Intelligence Custom Reporting

Kentucky
UNBRIDLED SPIRIT
eMARS
Management Administrative & Reporting System

Customer Resource Center
eMARS Training
Phone: 502-564-9641
email: Finance.crcgroup@ky.gov
http://crc.ky.gov
http://finance.ky.gov/internal/emars/

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Business Objects Desktop Intelligence Custom Reporting

Prerequisites

You should have completed the following before continuing:

- eMARS 101 Introduction to eMARS
- eMARS 111 Chart of Accounts/Budget and Cash Control
- 1102 eMARS Introduction to infoAdvantage: Standard Reporting
- 1112 eMARS InfoAdvantage Custom Reporting
- Desktop Intelligence Software
    - **Installed** and **functioning** (on your local machine)
    - Password **assigned** (by Customer Resource Center)
    - Obtained Named User License (no sharing of software)

Objective

The *Standard Reporting* course will give you a thorough understanding of Business Objects and expose you to various functions that may aid in your custom reporting needs.

At the conclusion of this session, you will be able to:

- Log into Desktop Intelligence
- Understand *Universes* and *Data Providers*
- Define *Toolbars* in the *Query Panel* and *Report Panel*
- *Create* and *Run Queries*
- Apply *Conditions*, *Prompts* and *Filters* to *Queries* and *Reports*
- Apply *Formatting* such as *Sections* and *Breaks*
- Understand *Formulas* and *Variables*
- Join Multiple *Data Providers* (Two or More *Universes*, Two or More *Queries* on one *Universe*)
- Understand *Drill Down* and *Scope of Analysis*
- Understand *Combine Queries* (*Union*, *Minus*, and *Intersect*)
- Understand *Crosstab Queries*
- *Retrieve* and *Edit* a *Statewide Report*

Instructor Led Course

This course is taught over three days and presented in a computer lab or training room with an instructor and one or more facilitators. The instructor will present the information by walking students through the training manual and completing the examples in each chapter on the screen. The students in the class will follow by doing the same steps as the instructor. The students will be asked to complete exercises containing review questions about the material covered and hands-on exercises at various intervals throughout the course.

Training Data

Various *Universes* will be used in this course. *Training IDs* are provided with access to Department 785, Finance Facilities data, with permission from the agency.

General Overview

Business Objects Desktop Intelligence (referred to as “Desktop Intelligence” throughout this training manual) is a reporting tool that is used to create simple and complex reports. It is an application that allows people to access and format information stored in databases and other data sources. Along with the delivered reports, Desktop Intelligence includes advanced functions to facilitate easy building and editing of custom queries as well as manipulating the report layout, data display, and presentation of a custom report.

Desktop Intelligence differs from infoAdvantage/WebI in that you must purchase a license and have the software installed on your computer. This course will review your previous understanding of Universes and expose you to the many functions that can aide in your custom reporting needs.

InfoAdvantage Universes point to data warehouse tables that are updated each night using an *Extract, Transform and Load* (ETL) process. The data warehouse reflects data from the previous business day, which is loaded to the data warehouse during the *eMARS Nightly Cycle*.

It is important to note that users should always check the eMARS News & Alert web site @ http://mars.ky.gov/alerts/marsnewsalerts.htm each morning to verify that the ETL process has completed and that the data warehouse is ready for reporting. Usually, if the ETL process has not completed, you will not be able to log into Desktop Intelligence; however, the possibility exists for an exception to occur and infoAdvantage may be accessible even if the data warehouse has not been completely updated.

Chapter 1: Getting Started

Opening Desktop Intelligence

To open Desktop Intelligence

1. Click on ***Start/Programs/Business Objects XI 3.1/Business Objects Enterprise Client Tools/Desktop Intelligence***

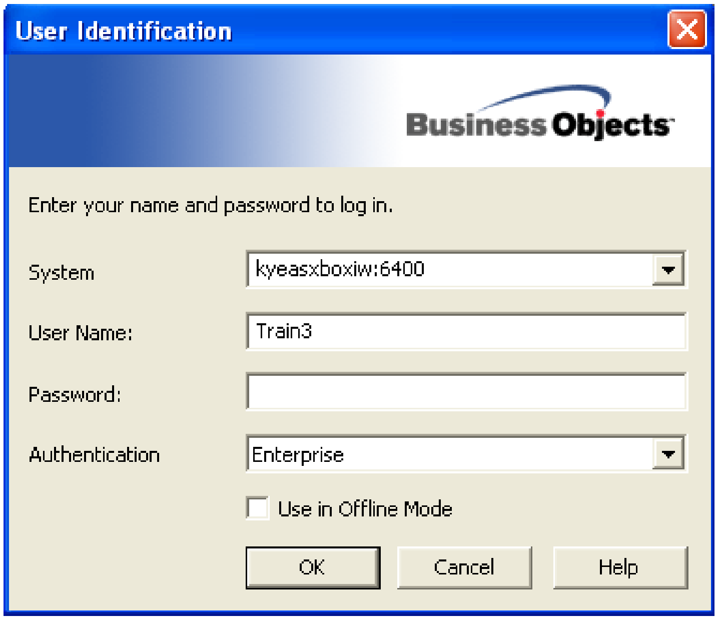
   You will be prompted to input your *User Name* and *Password*. Logging into Desktop Intelligence identifies you to the system allowing you to access features, open reports, or retrieve inbox documents that are available to your profile.

   NOTE: The version of Business Objects may change from XI 3.1 to a higher version in the future.

   The Customer Resource Center must initially set up your password once the software has been installed.

2. To log in, simply **enter** a ***System, User Name, Password,*** and ***Authentication.*** For training purposes, *Training IDs* and *Passwords* will be supplied by your instructor. Remember **passwords are case sensitive.**

NOTE: The generic *User Name* and *Password* that you use during training will not be valid after the conclusion of each class. This has been set up primarily for use in this class.



Enter your name and password to log in.

System kyeasxboxiw:6400

User Name: Train3

Password:

Authentication Enterprise

☐ Use in Offline Mode

3. Next, Click the ***OK*** button.

CAUTION: If you attempt to log in fails on a number of consecutive occasions, you will lock out your account. You only have three (3) tries. You cannot log in again until a *Supervisor* has reset your password. Please *email* the Customer Resource Center @ Finance.CRCGroup@ky.gov to have you account unlocked.

Use in Offline Mode

This option allows reports that have been saved to your local computer to be opened, even when the network is down. You will not be able to retrieve, publish or send reports, but you may be able to refresh them with the latest data that has been stored on your computer.

The *Use in Offline Mode* option should only be used when the network is down or when the computer is not attached to the network. When reports are refreshed, Desktop Intelligence checks to see if there are any new changes to the way the data is to be retrieved; if there are any changes, then Desktop

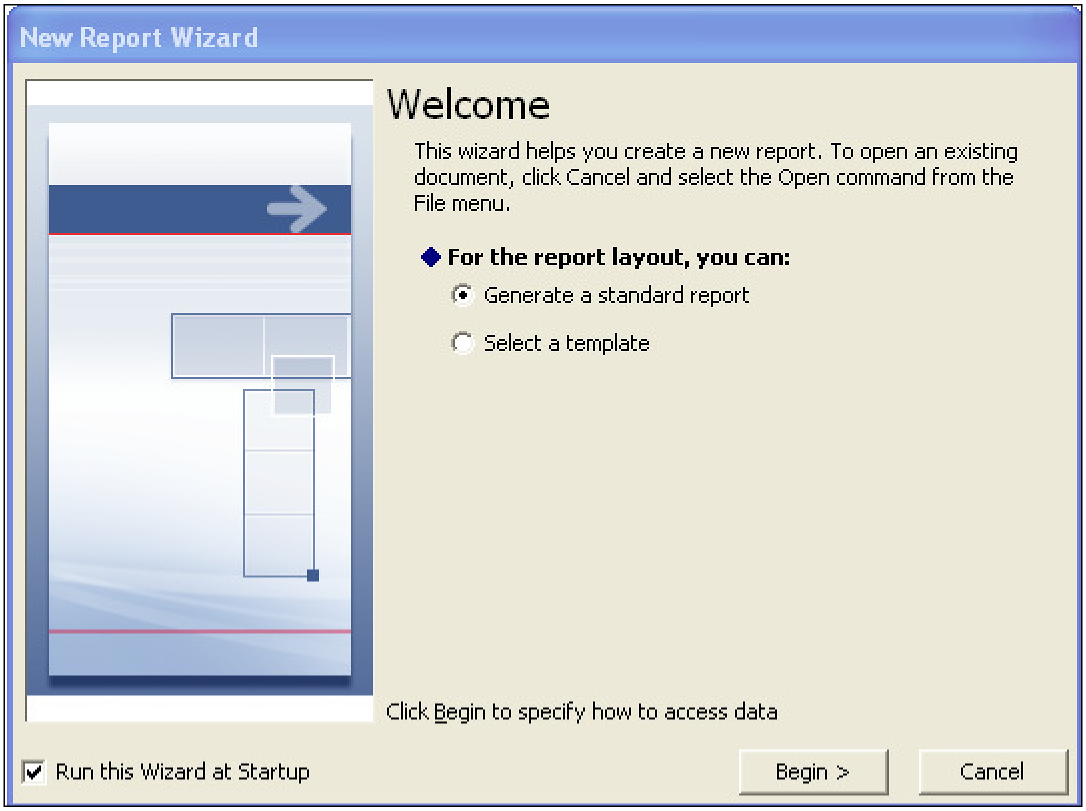
Intelligence downloads the new instructions to your machine. However, if the *Use in Offline Mode* option has been checked, Desktop Intelligence can not check for these changes.

Selecting a Data Provider

After you log in to Desktop Intelligence, the ***New Report Wizard*** should display. You use this wizard when creating new reports. If you are retrieving a report from the repository or opening a report from your computer, you may click on the *Cancel* button to exit the wizard.

NOTE: You may uncheck the ***Run this Wizard at Startup*** option that is located in the lower left corner of the wizard panel if you do not want the wizard to automatically start when you log in to Desktop Intelligence. Leave this boxed checked if you want the wizard to be displayed when the application is first opened.

4. Click on ***Generate a Standard Report***



New Report Wizard

Welcome

This wizard helps you create a new report. To open an existing document, click Cancel and select the Open command from the File menu.

◆ **For the report layout, you can:**

● Generate a standard report

○ Select a template

Click Begin to specify how to access data

☑ Run this Wizard at Startup

5. Click on ***Begin >***.

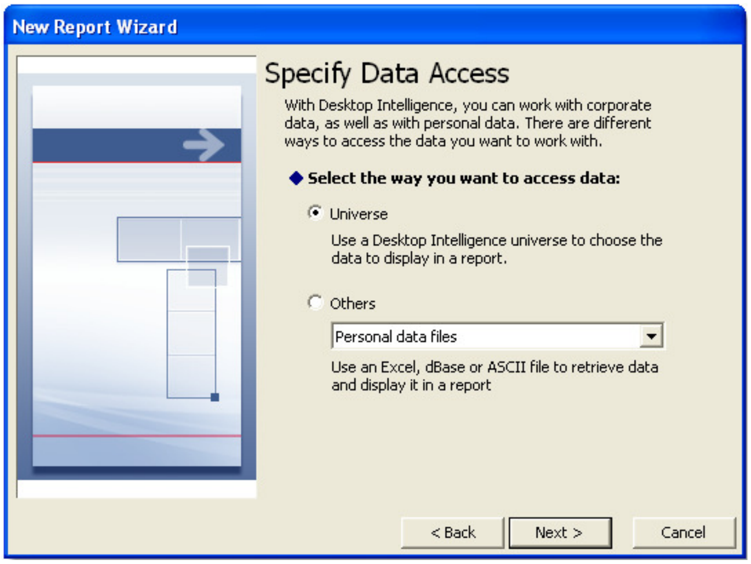
   Once you have clicked on ***Begin >***, the wizard will move to the *Specify Data Access* section of the wizard. This next step will allow you to choose which type of *Data Provider* to use in your report.

Next, we want to ***Select the way you want to access data.*** You have several options to choose from.

Universe will allow you to choose from a list of *Universes* that are available and that point to data in the *Reporting Data Warehouse.*

6. Select ***Universe***

7. Click ***Next >*** to see a list of *Universes*.


New Report Wizard
Specify Data Access
< Back
Next >
Cancel

With Desktop Intelligence, you can work with corporate data, as well as with personal data. There are different ways to access the data you want to work with.

◆ **Select the way you want to access data:**

● Universe

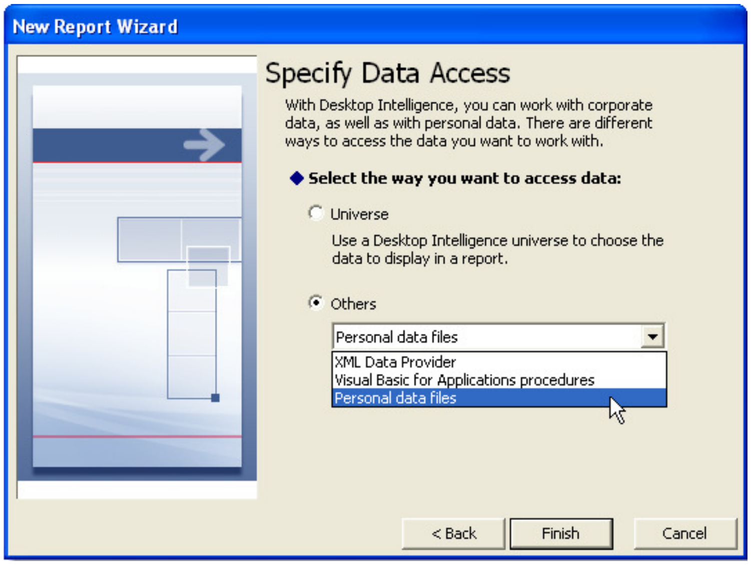
Use a Desktop Intelligence universe to choose the data to display in a report.

○ Others

Personal data files

Use an Excel, dBase or ASCII file to retrieve data and display it in a report

Others will allow you to choose from a list of data providers outside the *Universes*. Depending on the software installation, "other" options will vary. Some examples include:


New Report Wizard
Specify Data Access
XML Data Provider
Visual Basic for Applications procedures
Personal data files
< Back
Finish
Cancel

With Desktop Intelligence, you can work with corporate data, as well as with personal data. There are different ways to access the data you want to work with.

◆ **Select the way you want to access data:**

○ Universe

Use a Desktop Intelligence universe to choose the data to display in a report.

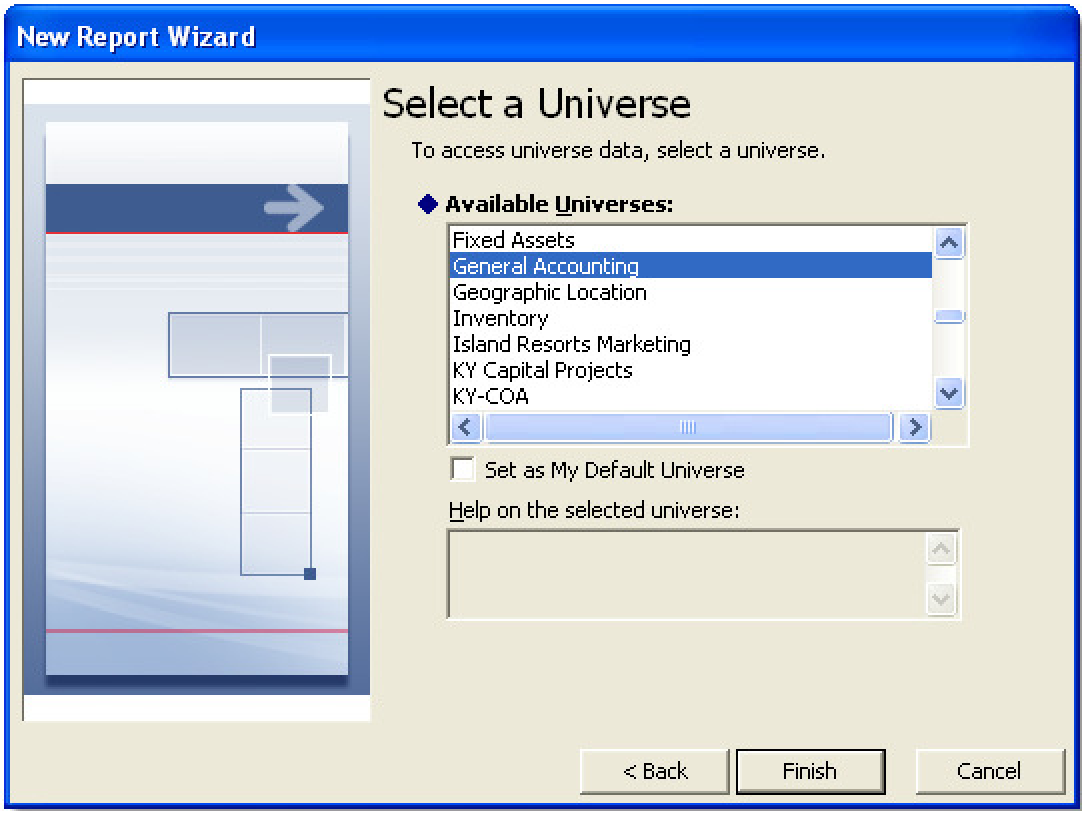
● Others

Personal data files

Visual Basic for Applications procedures are special programs developed within the BO document.

Personal data files are files that are stored on your computer such as an *Excel File*.

After you click on *Universe* then click *Finish*, the *New Report Wizard* screen will appear and provide a list of *Available Universes*.


New Report Wizard
Select a Universe
To access universe data, select a universe.
◆ Available Universes:
Fixed Assets
General Accounting
Geographic Location
Inventory
Island Resorts Marketing
KY Capital Projects
KY-COA
☐ Set as My Default Universe
Help on the selected universe:
< Back
Finish
Cancel

8. Click on the ***General Accounting*** universe.
9. Click on ***Finish.*** The wizard panel will disappear and the *Query Panel will appear.*

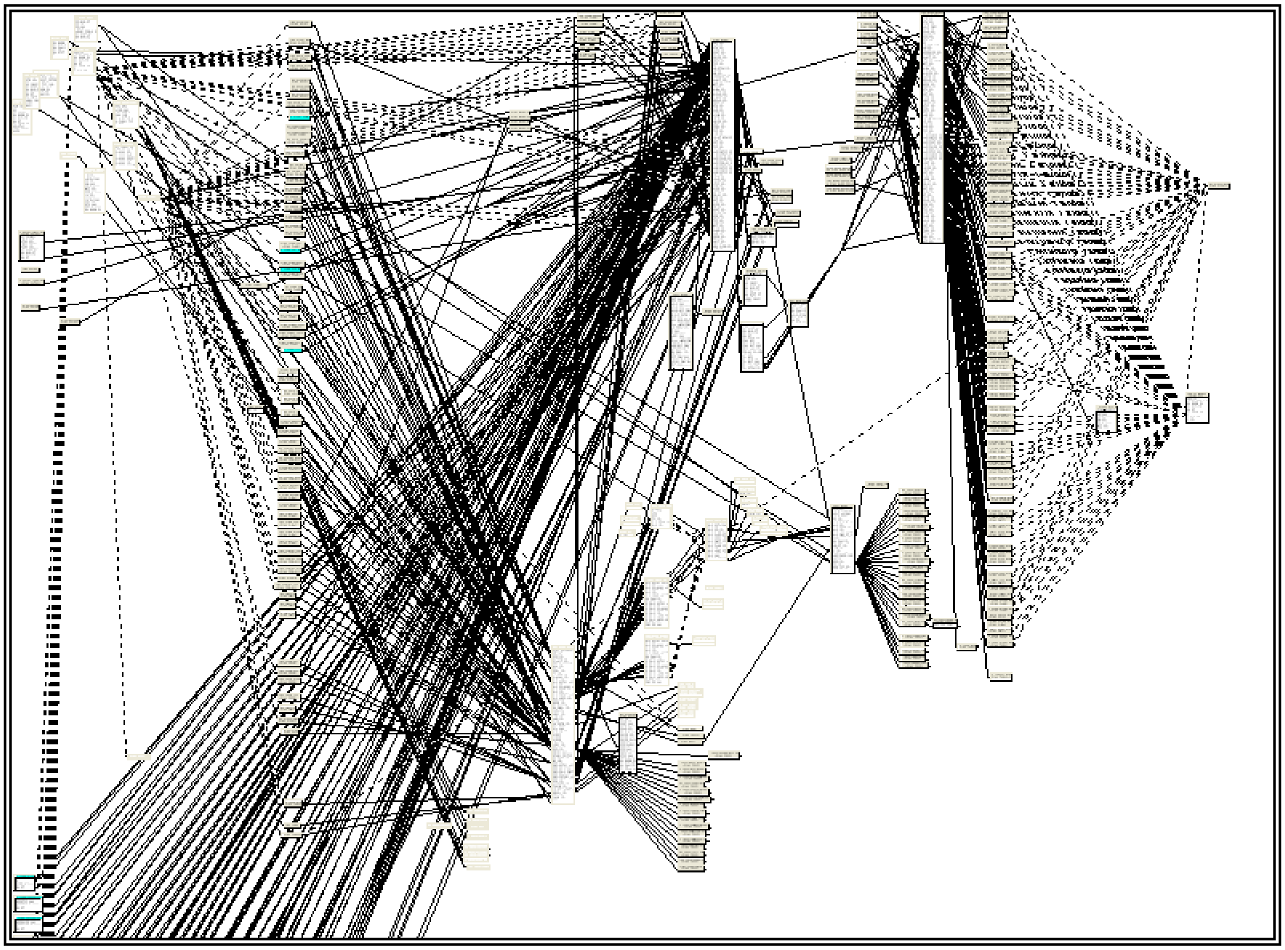
Chapter 2: Universes

What is a Universe

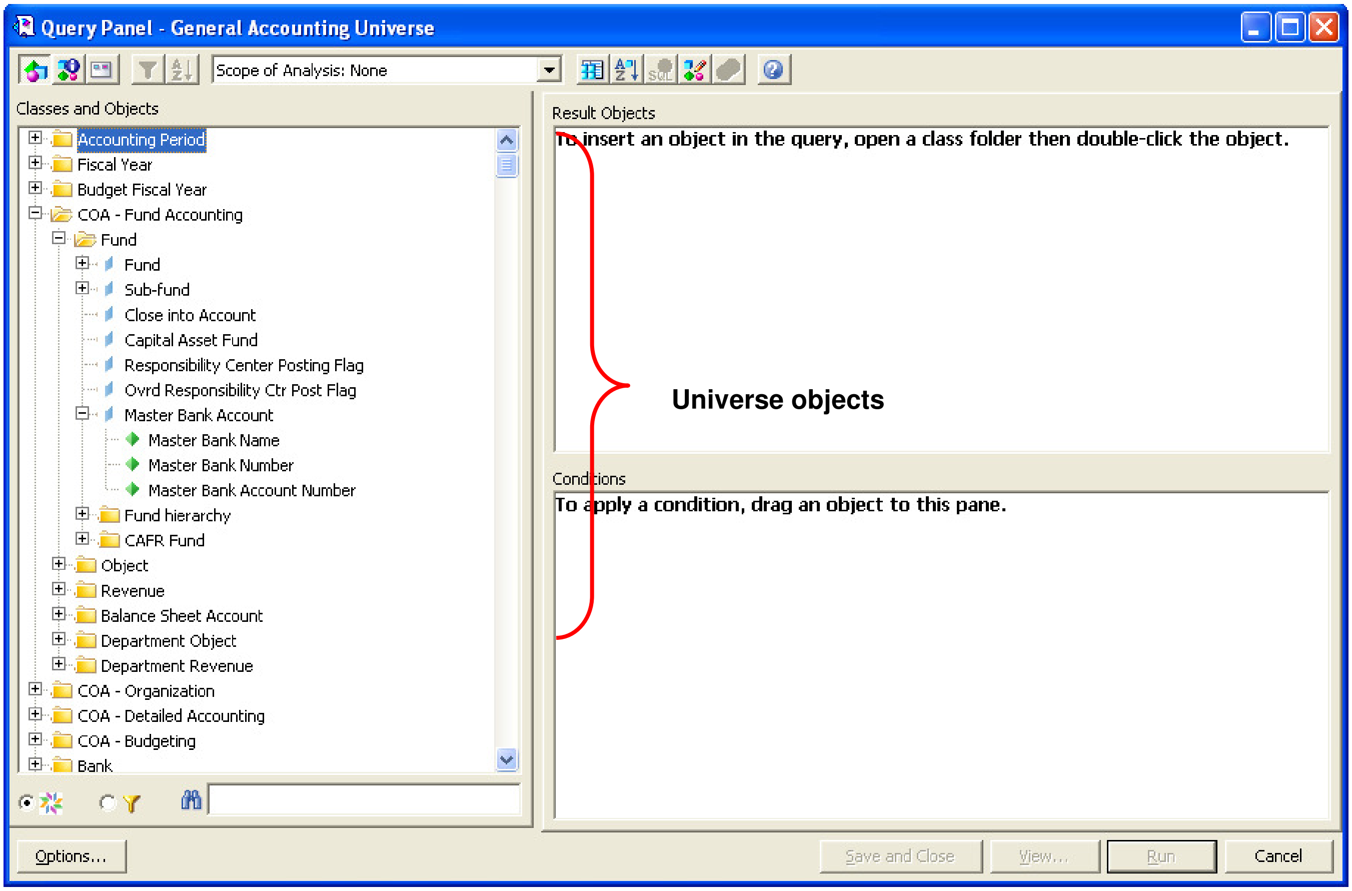
A *Universe* is a database interface that maps objects to fields in a database or a grouping of tables. It provides an easy to use interface for users to run queries against a database to create reports and perform data analysis.

The *Universe* simplifies the report creation process by eliminating the need to know the database structure or be a relational database expert. It also provides automatic joins between database tables.

Below is an example of a *Universe* with all the tables joined together. The multiple boxes represent tables and the lines are joins between the tables. See *Appendix F Primary Verses Kernel Universes*.



The *Universe* appears in the *Query Panel* to the left of the *Result Objects* and *Conditions* panels.



Query Panel - General Accounting Universe
Scope of Analysis: None
Classes and Objects
Accounting Period
Fiscal Year
Budget Fiscal Year
COA - Fund Accounting
Fund
Fund
Sub-fund
Close into Account
Capital Asset Fund
Responsibility Center Posting Flag
Ovrd Responsibility Ctr Post Flag
Master Bank Account
Master Bank Name
Master Bank Number
Master Bank Account Number
Fund hierarchy
CAFR Fund
Object
Revenue
Balance Sheet Account
Department Object
Department Revenue
COA - Organization
COA - Detailed Accounting
COA - Budgeting
Bank
Result Objects
Conditions
Universe objects
Options...
Save and Close
View...
Run
Cancel

To insert an object in the query, open a class folder then double-click the object.

To apply a condition, drag an object to this pane.

Classes and Objects

A *Universe* is a collection of *Universe Objects*. *Universe Objects* represent fields in a database table. The object names will be everyday terms instead of the cryptic field names in a database. Related *Universe Objects* are grouped into *Classes*.

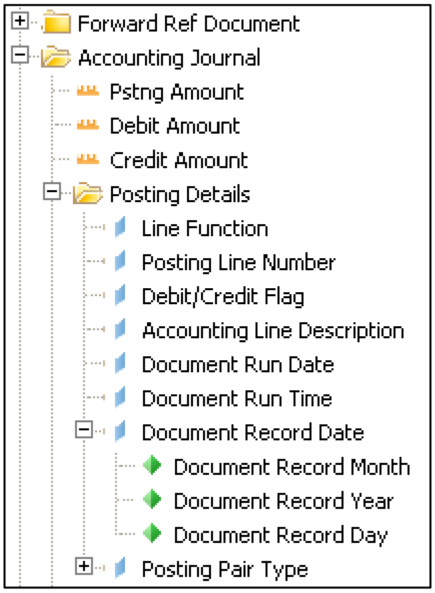
Classes – Folders

Classes are logical groupings of *Universe Objects*. For example, all address fields might be grouped together in one *Class*.

Universe Objects

There are three different types of *Universe Objects*: *Dimension, Detail* and *Measure*.

Different types of universe objects



- Forward Ref Document
- Accounting Journal
  - Pstng Amount
  - Debit Amount
  - Credit Amount
  - Posting Details
    - Line Function
    - Posting Line Number
    - Debit/Credit Flag
    - Accounting Line Description
    - Document Run Date
    - Document Run Time
    - Document Record Date
      - Document Record Month
      - Document Record Year
      - Document Record Day
    - Posting Pair Type

Dimension Objects (◆) – Blue Diamond

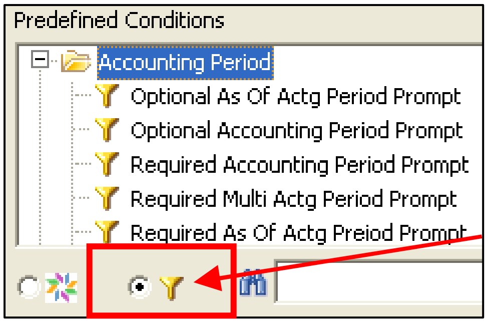
These objects are either text or dates, such as *Fiscal Year* or *Document Record Date*. *Dimensions* represent the basic structure of the data.

Detail Objects (◆) – Green Pyramid

Always associated with a dimension object and provides additional descriptive data about that dimension. *Details* such as *Start Date*, *End Date* and *Closed Flag* are objects that could be related to a *Fiscal Year Dimension*.

Measure Object (▬) – Orange Ruler

Always represents numeric data that is the result of calculations on data in the database. A measure's value changes depending on the context of the report. For example, the *Pstng Amount* will differ depending on the *Closing Classification*, *Posting Code* or if the report is for one *Accounting Period* or multiple periods.



Predefined Conditions

- Accounting Period
  - Optional As Of Actg Period Prompt
  - Optional Accounting Period Prompt
  - Required Accounting Period Prompt
  - Required Multi Actg Period Prompt
  - Required As Of Actg Preiod Prompt

Predefined Filter (▼) – Yellow Funnel

Special kind of object that may be added to reports to restrict data that is returned. Information is limited to defined values. They are created by a *Universe Designer* for conditions that are complicated and/or commonly used. There are predefined filters, custom filters and prompts. An example of a filter is *Required Accounting Period Prompt*.

NOTE: In *Desktop Intelligence*, to view the *Predefined Filters*, you must Click on the *Filter* icon radio button at the bottom of the *Query Panel*.

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Chapter 3: Creating a Report

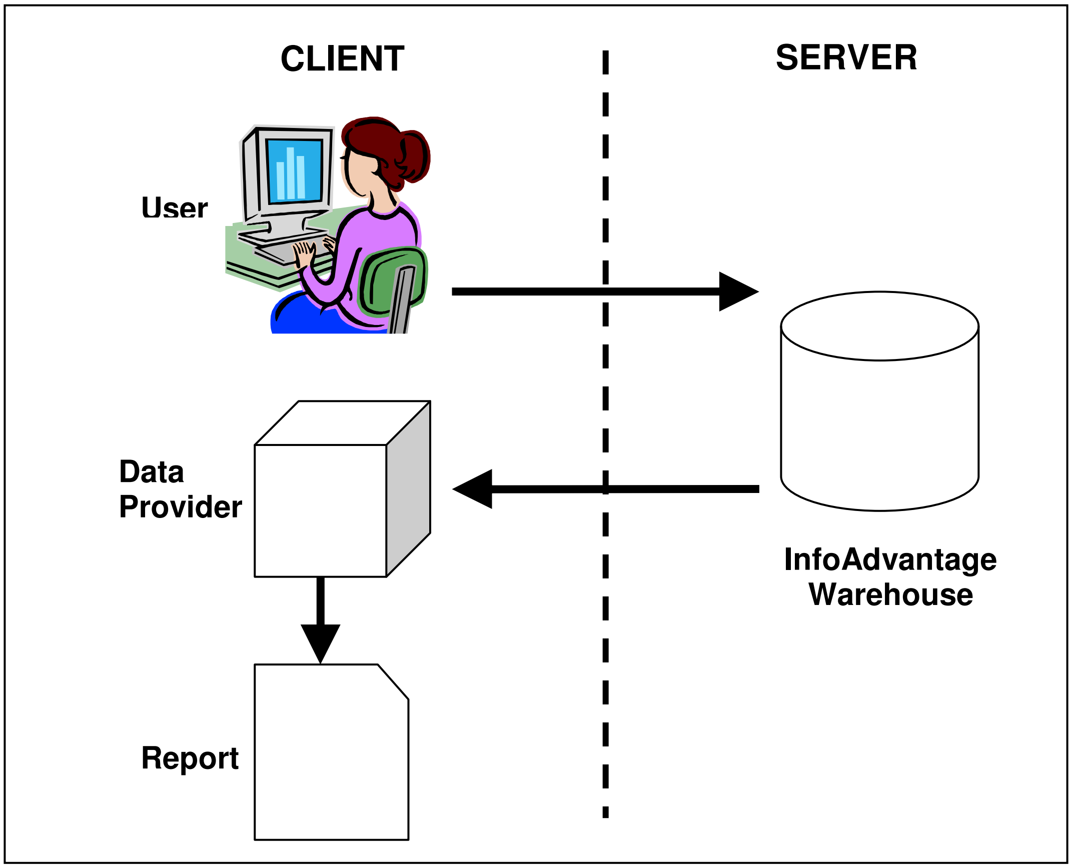
Creating a report consists of

- Building the query by dragging and dropping objects from the *Universe* into the *Result Objects Panel*
- Adding filters, if desired
- Setting the *Scope of Analysis*, if creating a *Drill Down* report
- Managing query properties
- Running the query

A query is one or more statements designed to answer a business question that requires data from a database. In other words, the query is a means to ask the database for information.

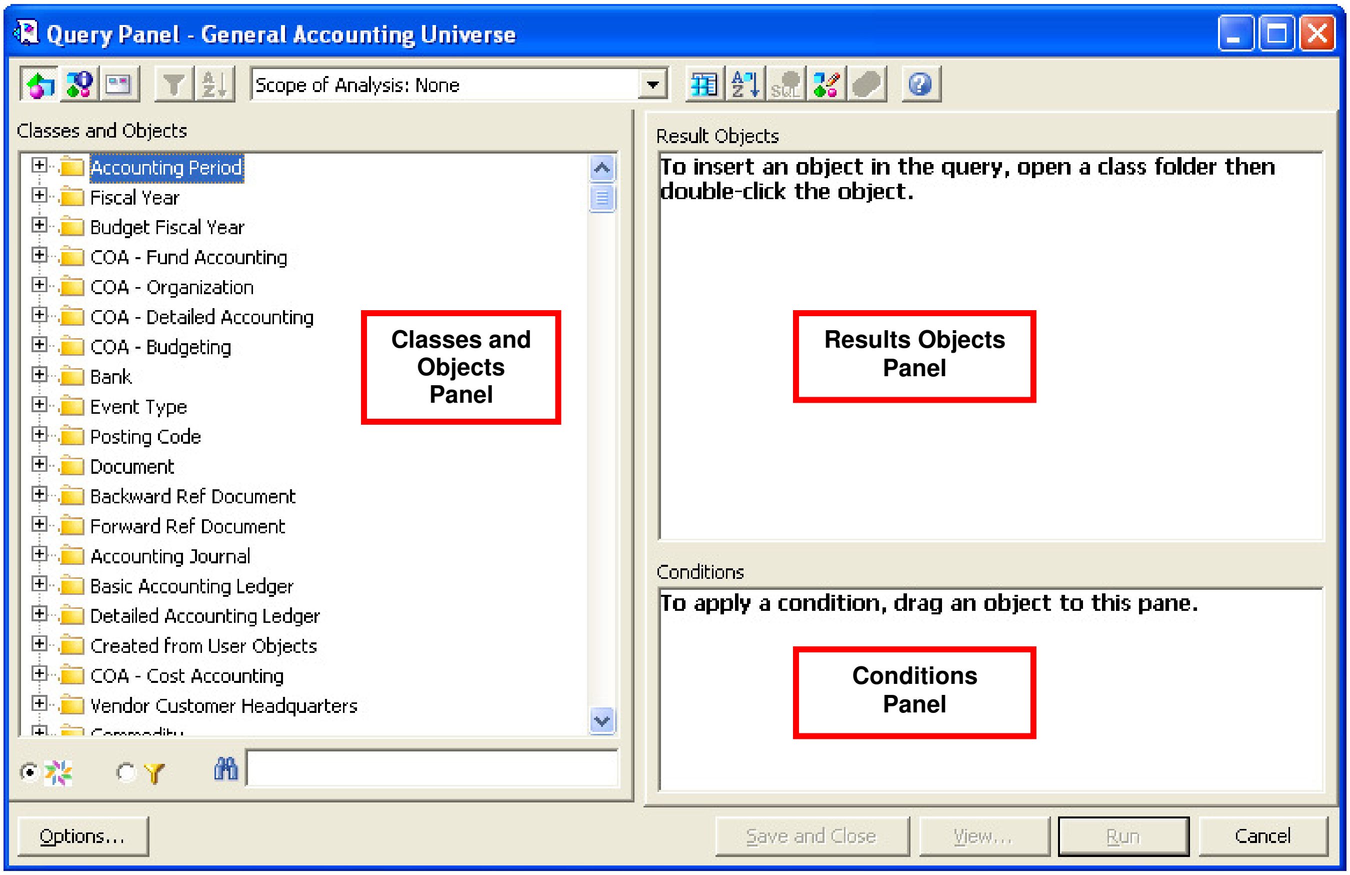
When the query is run, the request for information is processed in the database, and if the data is available, the results are sent back to the report panel in the form of a table which contains rows and columns.

The Query Process



Query Panel (also referred to as the *Data Provider*)

The *Query Panel* displays all of the objects that are available in a *Universe*. When the query is ready to be built, select the *Dimension* and *Detail Objects* from the *Universe* that represent the information that you want to retrieve, and drag them to the *Result Objects* panel. Add *Measure Objects* that represent the calculation, or the action that you want to perform on the information.


Query Panel - General Accounting Universe
Scope of Analysis: None
Classes and Objects
Accounting Period
Fiscal Year
Budget Fiscal Year
COA - Fund Accounting
COA - Organization
COA - Detailed Accounting
COA - Budgeting
Bank
Event Type
Posting Code
Document
Backward Ref Document
Forward Ref Document
Accounting Journal
Basic Accounting Ledger
Detailed Accounting Ledger
Created from User Objects
COA - Cost Accounting
Vendor Customer Headquarters
Result Objects
Conditions
Options...
Save and Close
View...
Run
Cancel

To insert an object in the query, open a class folder then double-click the object.

To apply a condition, drag an object to this pane.

Classes and Objects Panel

Results Objects Panel

Conditions Panel

Show/Hide All Classes

Show/Hide Help

Wrap Result Objects

Simple Condition

Sort

Scope of Analysis

Manage Sorts

View SQL

User Objects

Combine Queries

Help

● ○

Show all Objects and Classes
and
Show All Predefined Conditions

The search feature is an extremely handy tool. There may be times when there are too many objects in the *Query Panel* and it is difficult to find an object of interest.

To use the search feature start typing the object name and the object will be highlighted in the ***Classes and Objects Panel.*** Each time you hit enter you will be taken to each object that has the search word in the name.

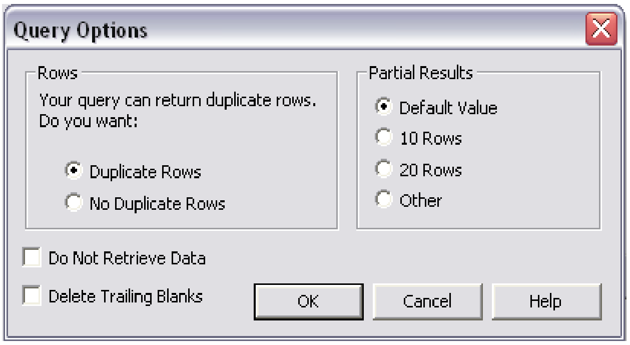
NOTE: Use caution when using the search feature. Some universes may contain objects in more than one class that is located on more than one database table. Using the wrong object could cause undesirable results in your reports.

Query Options

Row Options:

The default setting for this option is *Duplicate Rows*. This option puts no restriction on the data returned by the query.

The other setting is *No Duplicate Rows.* This option tells the query to retrieve only distinct combinations of row values. It is important not to use this option with queries that do have summary measures (i.e. *Posting Amount*) in the *Result Objects* window, because it may force the query to return incorrect information.



Your query can return duplicate rows.
Do you want:

● Duplicate Rows
○ No Duplicate Rows

● Default Value
○ 10 Rows
○ 20 Rows
○ Other

☐ Do Not Retrieve Data
☐ Delete Trailing Blanks

Partial Results Options:

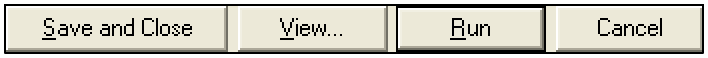
This section allows the number of rows returned by the query to be limited to a defined number of rows. We use this option for several reasons. One reason is that we may want to limit the rows returned to a report when we are creating and testing it. The reason for this is that if we did not limit the rows, the report may retrieve thousands of rows and make testing more difficult. Once testing has been completed and the report is ready to be released, simply set the option back to default, which places no limitation on the number of rows returned.

Do Not Retrieve Data Option:

This option allows you to exit the *Query Panel* by clicking the *Run* button without running the query. This option does the same thing as *Save and Close*. It closes the query without running it so that the query may be saved.

Delete Trailing Blanks Option:

This option deletes trailing spaces from rows that are padded in order to make all rows the same length. This option keeps the extra spaces from taking up memory and helps the query run faster.


Save and Close
View...
Run
Cancel

Save and Close: Closes the query, saves all changes, purges data from your report, and does not run the query.

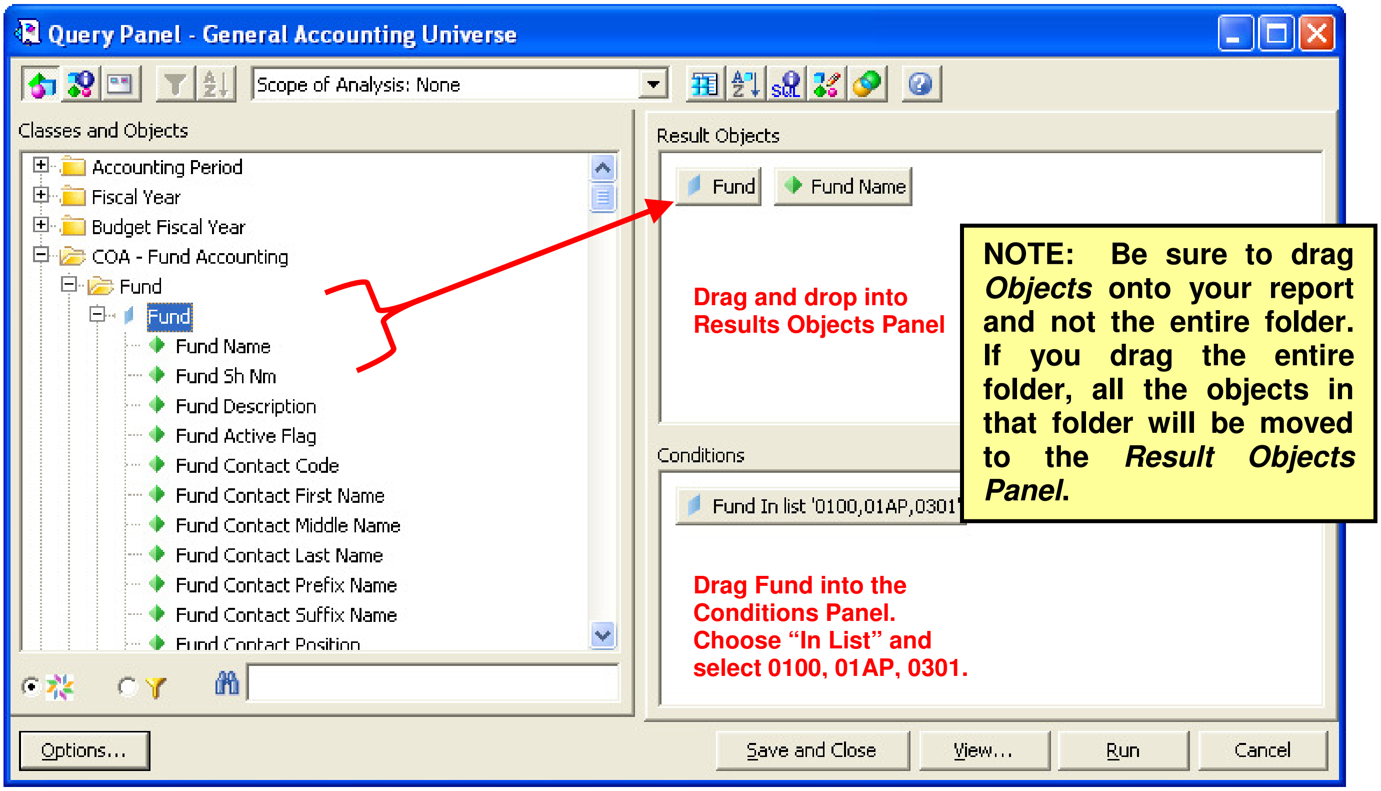
View: Results are displayed in the Data Manager to be viewed and accepted before the data is presented in the report.

Run: Executes the current query and returns data to the report. The first time it is run, it will create a new report. If it is run after objects have been removed or added, the report will be modified when run again. However, if the report contains more than one table, Desktop Intelligence will ask if the report should be left as it is or if the changes should be displayed in the report.

Cancel: Dismisses the panel without running or saving the current query. Any changes made to the existing query will not be saved and any new queries will not generate a report.

Building a Query

To build a query, simply find the object you want on your report and drag it in to the *Result Objects Panel.*


Query Panel - General Accounting Universe
Scope of Analysis: None
Classes and Objects
Accounting Period
Fiscal Year
Budget Fiscal Year
COA - Fund Accounting
Fund
Fund
Fund Name
Fund Sh Nm
Fund Description
Fund Active Flag
Fund Contact Code
Fund Contact First Name
Fund Contact Middle Name
Fund Contact Last Name
Fund Contact Prefix Name
Fund Contact Suffix Name
Fund Contact Position
Result Objects
Fund
Fund Name
Conditions
Options...
Save and Close
View...
Run
Cancel

Fund In list '0100,01AP,0301'

Drag and drop into Results Objects Panel

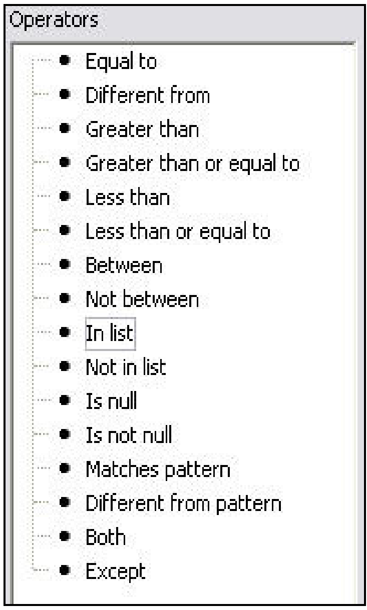
NOTE: Be sure to drag *Objects* onto your report and not the entire folder. If you drag the entire folder, all the objects in that folder will be moved to the *Result Objects Panel*.

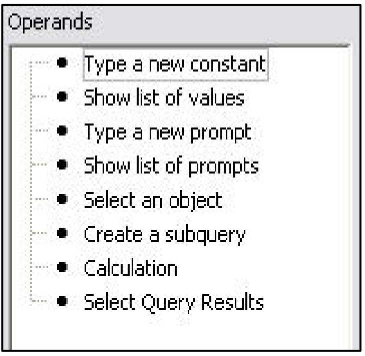
Drag Fund into the Conditions Panel. Choose "In List" and select 0100, 01AP, 0301.

10. Locate and drag ***Fund** and **Fund Name*** from under the ***COA – Fund Accounting Class*** to the ***Result Objects Panel.***

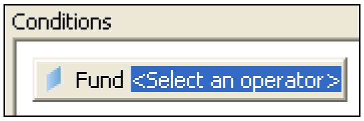
When building a condition in a query, you need to

- Find the object you wish to build a condition on.
- Drag the object to the *Conditions Panel.*
- Select the operator (*Equal to, Different from, In list,* etc.).
- Select the operand (*Type a new constant, Show list of values, Type a new prompt,* etc) from the list of *Operands.*


Operators
- Equal to
- Different from
- Greater than
- Greater than or equal to
- Less than
- Less than or equal to
- Between
- Not between
- In list
- Not in list
- Is null
- Is not null
- Matches pattern
- Different from pattern
- Both
- Except

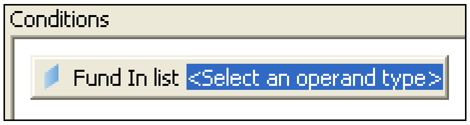

Operands
- Type a new constant
- Show list of values
- Type a new prompt
- Show list of prompts
- Select an object
- Create a subquery
- Calculation
- Select Query Results

11. Drag ***Fund*** into the ***Conditions Panel.***


Conditions

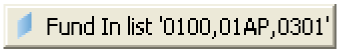
Fund <Select an operator>

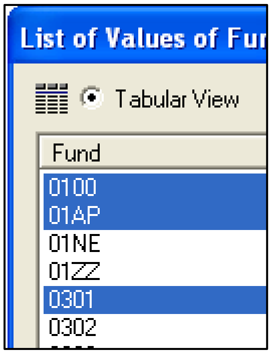
12. From the list of *Operators* choose ***In List.***


Conditions

Fund In list <Select an operand type>

13. From the list of *Operands* choose ***Show List of Values*** and select ***0100, 01AP and 0301*** from the list.


Fund In list '0100,01AP,0301'



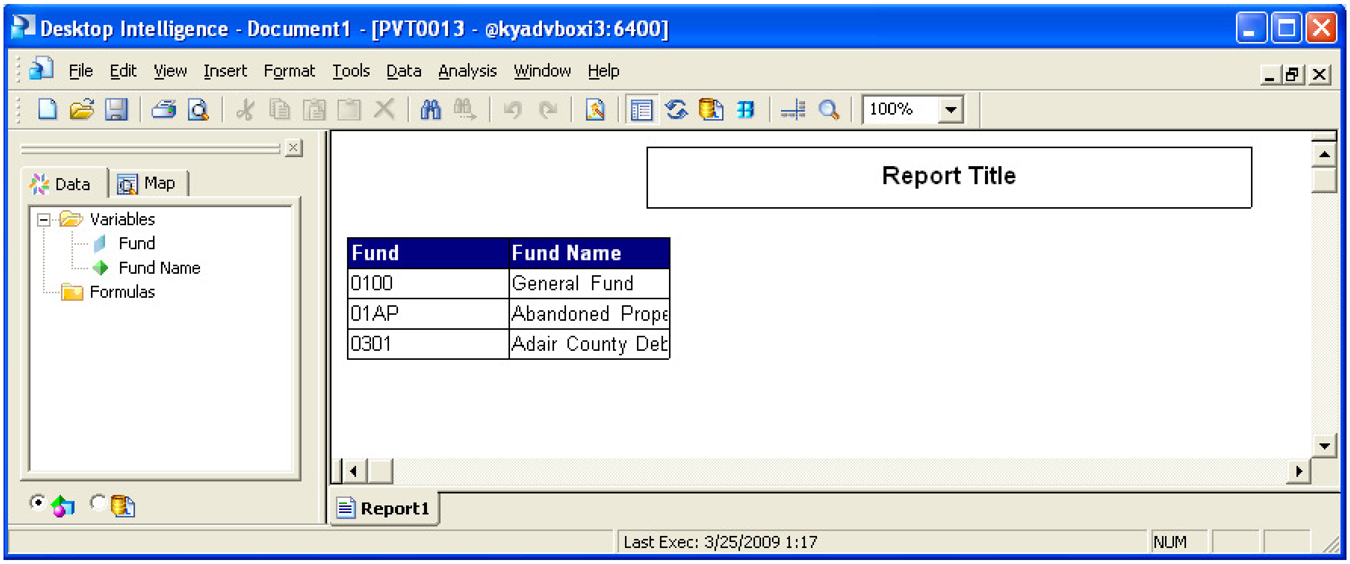
Fund
0100
01AP
01NE
01ZZ
0301
0302

HINT: Holding the *CTRL* key down will allow you to select one *Fund* at a time. Holding the *Shift* key down while clicking on *Fund 0100* and then *Fund 0301* will allow you to select all *Funds* in between (*01AP, 01NE).*

14. Click ***Run*** Run to create the report once you have the objects and conditions that you need.

Report Panel

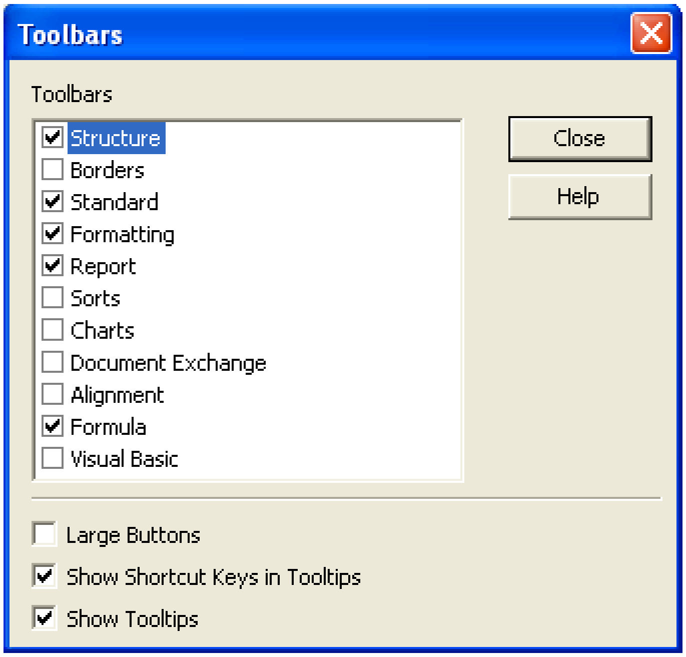
After clicking on *Run* in the *Query Panel*, you should have something similar to the figure below. If you notice, the report contains the objects that we moved into the *Result Objects Panel*. As well, the report only returned those *Funds* that we selected in the *Conditions Panel* (0100, 01AP, 0301).


Desktop Intelligence - Document1 - [PVT0013 - @kyadvboxi3:6400]
File Edit View Insert Format Tools Data Analysis Window Help
100%
Data
Map
Variables
Fund
Fund Name
Formulas
Report Title
Report1
Last Exec: 3/25/2009 1:17
NUM

Fund	Fund Name
0100	General Fund
01AP	Abandoned Prope
0301	Adair County Deb

Now, let's review some features of the report panel.

First, let's turn on some *Toolbars* that you will use fairly often when formatting a report.


Toolbars
Toolbars
Close
Help

- ☑ Structure
- ☐ Borders
- ☑ Standard
- ☑ Formatting
- ☑ Report
- ☐ Sorts
- ☐ Charts
- ☐ Document Exchange
- ☐ Alignment
- ☑ Formula
- ☐ Visual Basic

- ☐ Large Buttons
- ☑ Show Shortcut Keys in Tooltips
- ☑ Show Tooltips

15. Click on ***View*** then ***Toolbars***.

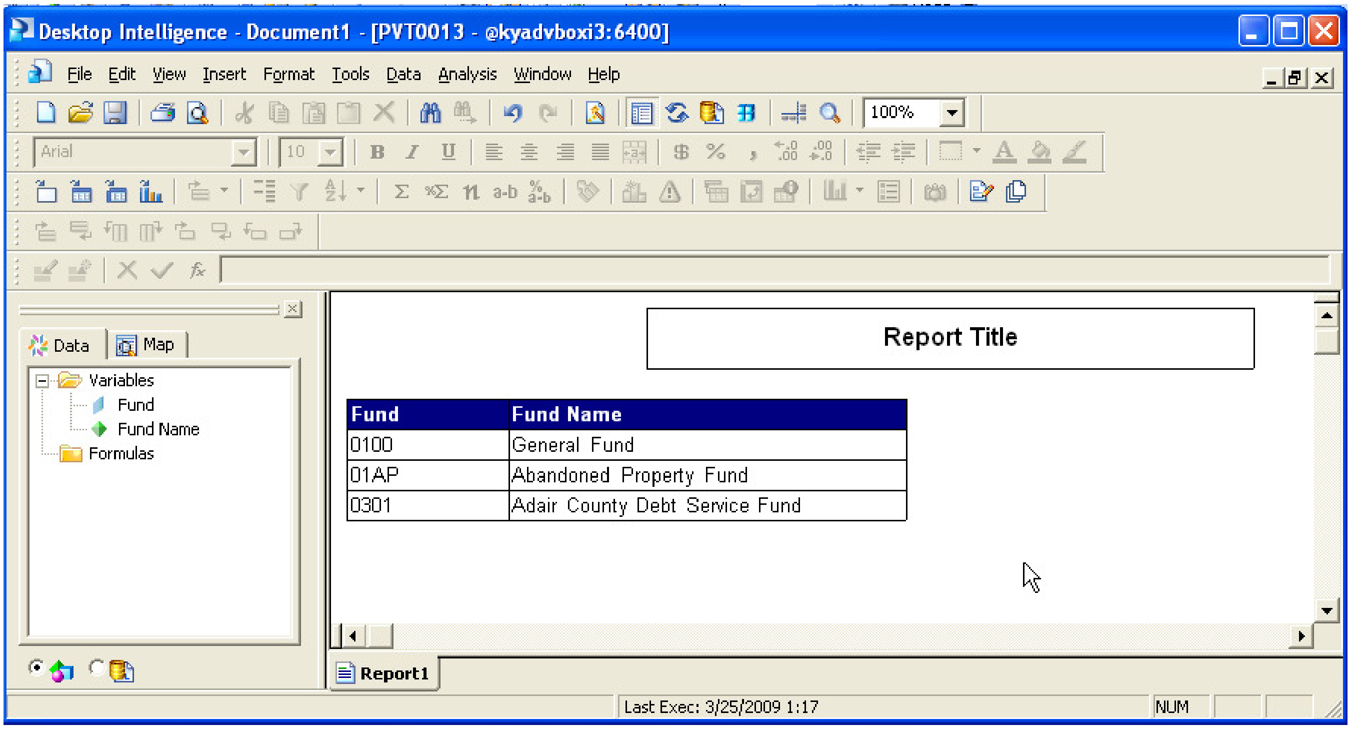
The five *Toolbars* that are most commonly used are:

- Structure
- Standard
- Formatting
- Report
- Formula

16. Check each of the **five toolbars** listed above.

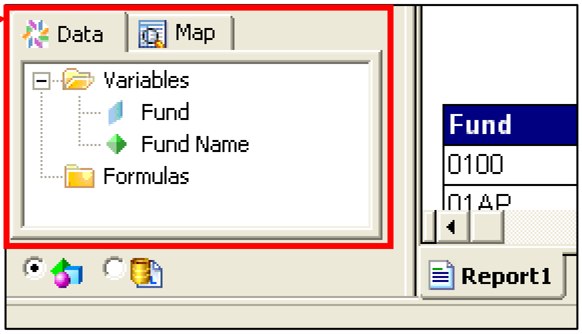
17. Click on ***Close.***

Your *Report Panel* should now look something like this:


Desktop Intelligence - Document1 - [PVT0013 - @kyadvboxi3:6400]
File Edit View Insert Format Tools Data Analysis Window Help
100%
Arial
10
Data
Map
Variables
Fund
Fund Name
Formulas
Report Title
Report1
Last Exec: 3/25/2009 1:17
NUM

Fund	Fund Name
0100	General Fund
01AP	Abandoned Property Fund
0301	Adair County Debt Service Fund

These four icons are the ones that you will utilize most often.


Data
Map
Variables
Fund
Fund Name
Formulas
Fund
0100
01AP
Report1

The *Report Manager* icon will hide/unhide your list of objects shown on the left side of the report panel above.

If you turn this off, *Data and Map* are hidden and you have more space to work on formatting your report.

The *Refresh* icon refreshes the report.

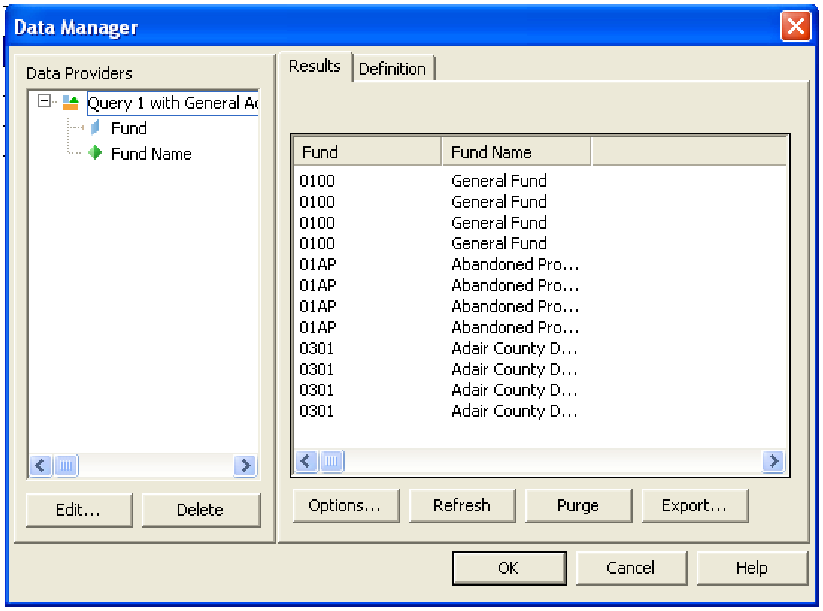
The *Edit Data Provider* icon takes you back to your query if you have one data provider or lets you choose which query you want to edit if you have more than one data provider.

The *Data Manager* (*Rubik's Cube*) icon brings up the *Data Manager* screen.

Data Manager

The *Data Manager* is divided into two tabs – the *Results* tab and the *Definition* tab. It also contains a *Data Providers* section. The *Data Providers* section lists all of the *Data Providers* that you are using in your report. *Edit* and *Delete* are two buttons below the *Data Providers* section. *Edit* will take you back to the query panel so you may edit your data provider and *Delete* will actually delete the *Data Provider* from your report.

NOTE: Before you *Delete* a *Data Provider* from the *Data Manager*, you should be sure to *Purge* the data. Otherwise, the data forever stays within the report unseen, which makes your saved report larger than it needs to be.



Fund	Fund Name
0100	General Fund
0100	General Fund
0100	General Fund
0100	General Fund
01AP	Abandoned Pro...
01AP	Abandoned Pro...
01AP	Abandoned Pro...
01AP	Abandoned Pro...
0301	Adair County D...
0301	Adair County D...
0301	Adair County D...
0301	Adair County D...

The *Results* section displays the exact data returned by the selected data provider, which can differ from the information displayed on the report. The data displayed here is raw data.

Below the *Results* section are four buttons that allow you to manipulate the data is some way.

Options: Will display the same options box that is available in the *Query Panel* that was covered earlier. If you make changes here, the changes will not be displayed until you *Refresh* the *Data Manager*.

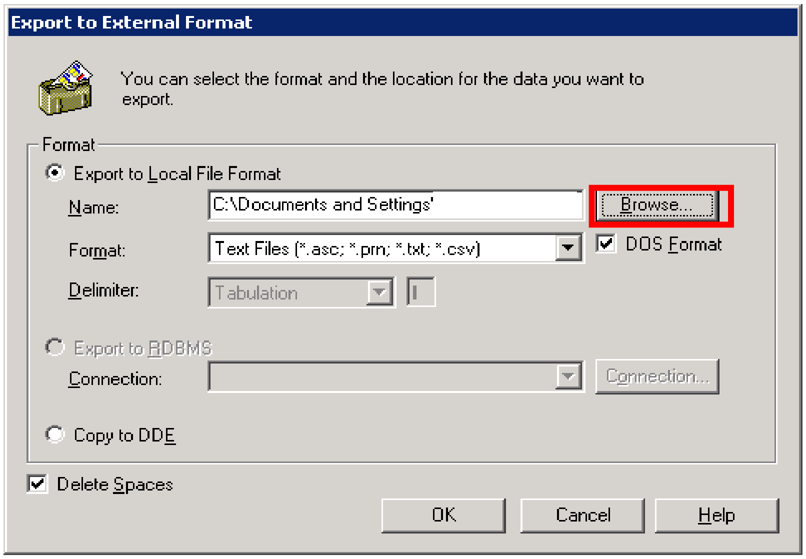
Refresh: Will refresh the selected *Data Provider*. This will allow you to review data without refreshing all *Data Providers* in your report.

Purge: Allows all of the data in a *Data Provider* to be removed from the report. Before publishing a report, it is important to Purge all the *Data Providers* and then save. This will make the file size of the report smaller and will take up less space in the repository.

Export: The *Export* button allows you to export the data from the *Data Providers*. The data will be exported exactly as it appears in the *Data Manager* and not as it appears on the report. Using the simple report we created using *Fund* and *Fund Name*.

18. To export the data in the *Data Manager* to your desktop, click ***Export***

19. Click ***Browse***



Export to External Format

You can select the format and the location for the data you want to export.

Format

● Export to Local File Format

Name: C:\Documents and Settings'

Format: Text Files (*.asc; *.prn; *.txt; *.csv)

☑ DOS Format

Delimiter: Tabulation

○ Export to RDBMS

Connection:

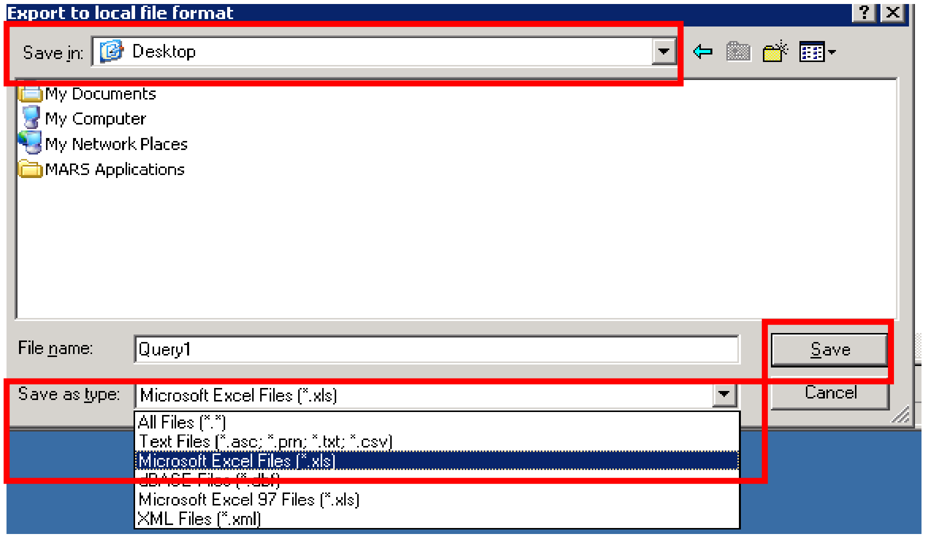
○ Copy to DDE

☑ Delete Spaces

20. Change the file path to your ***Desktop***.

21. Select ***Microsoft Excel Files*** as the file type.

22. Click ***Save***.



Export to local file format

Save in: Desktop

My Documents
My Computer
My Network Places
MARS Applications

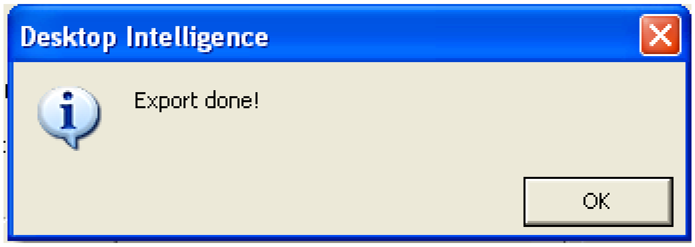
File name: Query1

Save as type: Microsoft Excel Files (*.xls)

All Files (*.*)
Text Files (*.asc; *.prn; *.txt; *.csv)
Microsoft Excel Files (*.xls)
dBASE Files (*.dbf)
Microsoft Excel 97 Files (*.xls)
XML Files (*.xml)

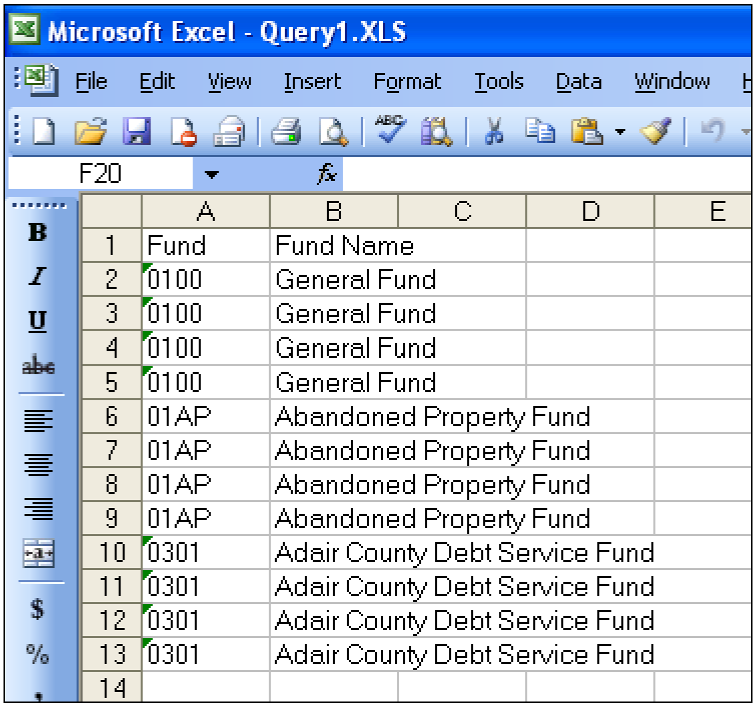
After you click *Save* you will be taken back to the *Export to External Format Screen* (above).

23. Click ***OK***.


Desktop Intelligence
OK

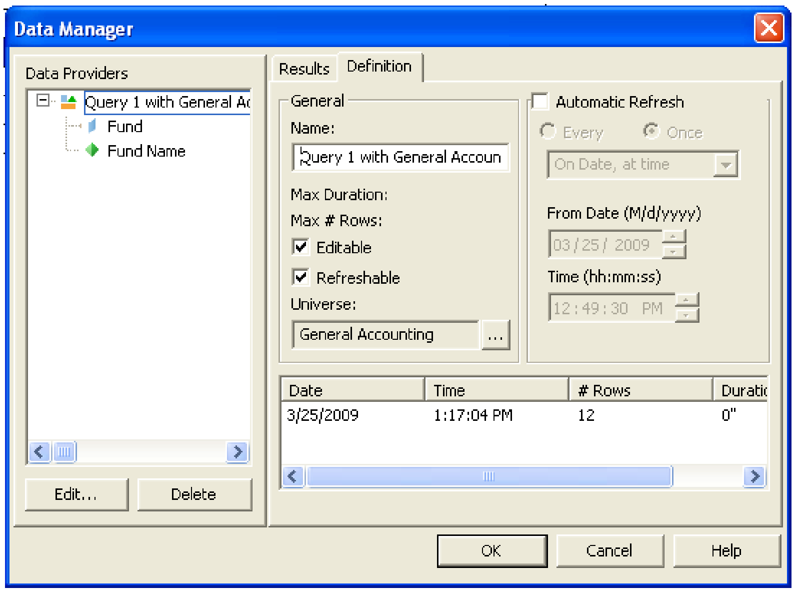
Export done!

You may now go to the *Desktop* and open up the file that you exported. When you open the *Excel* file that you exported, it should resemble the *Results* section in the *Data Manager*:


Microsoft Excel - Query1.XLS
File
Edit
View
Insert
Format
Tools
Data
Window
F20
fx

	A	B	C	D	E
1	Fund	Fund Name			
2	0100	General Fund			
3	0100	General Fund			
4	0100	General Fund			
5	0100	General Fund			
6	01AP	Abandoned Property Fund			
7	01AP	Abandoned Property Fund			
8	01AP	Abandoned Property Fund			
9	01AP	Abandoned Property Fund			
10	0301	Adair County Debt Service Fund			
11	0301	Adair County Debt Service Fund			
12	0301	Adair County Debt Service Fund			
13	0301	Adair County Debt Service Fund			
14					

Definition: The next section in the *Data Manager* is the *Definition Section*. This section allows you to view and define some of the attributes assigned to the data providers and the objects in them.



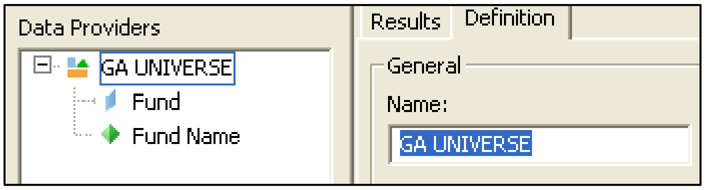
Query 1 with General Ac
Fund
Fund Name

General
Name: Query 1 with General Accoun
Max Duration:
Max # Rows:
☑ Editable
☑ Refreshable
Universe: General Accounting

☐ Automatic Refresh
○ Every ● Once
On Date, at time
From Date (M/d/yyyy) 03/25/2009
Time (hh:mm:ss) 12:49:30 PM

Date	Time	# Rows	Duratio
3/25/2009	1:17:04 PM	12	0"

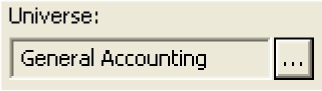
Name: The *Name* edit field will allow you to change the name of the *Data Provider*. For example, instead of keeping the name "*Query 1 with General Accounting*", you could change it to "*GA UNIVERSE*".



GA UNIVERSE
Fund
Fund Name

Name: GA UNIVERSE

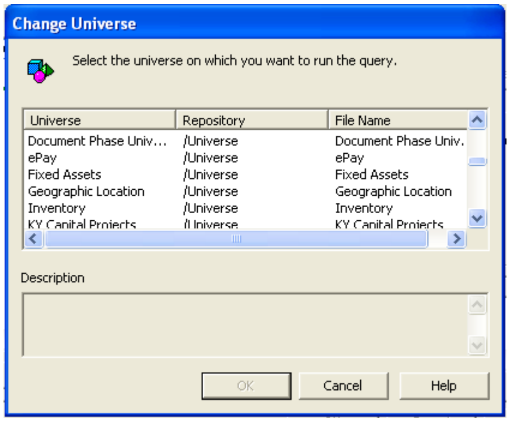
Universe: The *Universe* field allows the universe for a report/query to be changed.



Universe: General Accounting

In order to change to a new universe, the new universe must be compatible with the current universe. This means that it must have fields that are similar to the existing fields in the current data provider. Once a universe has been changed, the query must be refreshed to reflect the data that the new universe is pointing to.

This field is most often used when promoting reports from test universes to production.



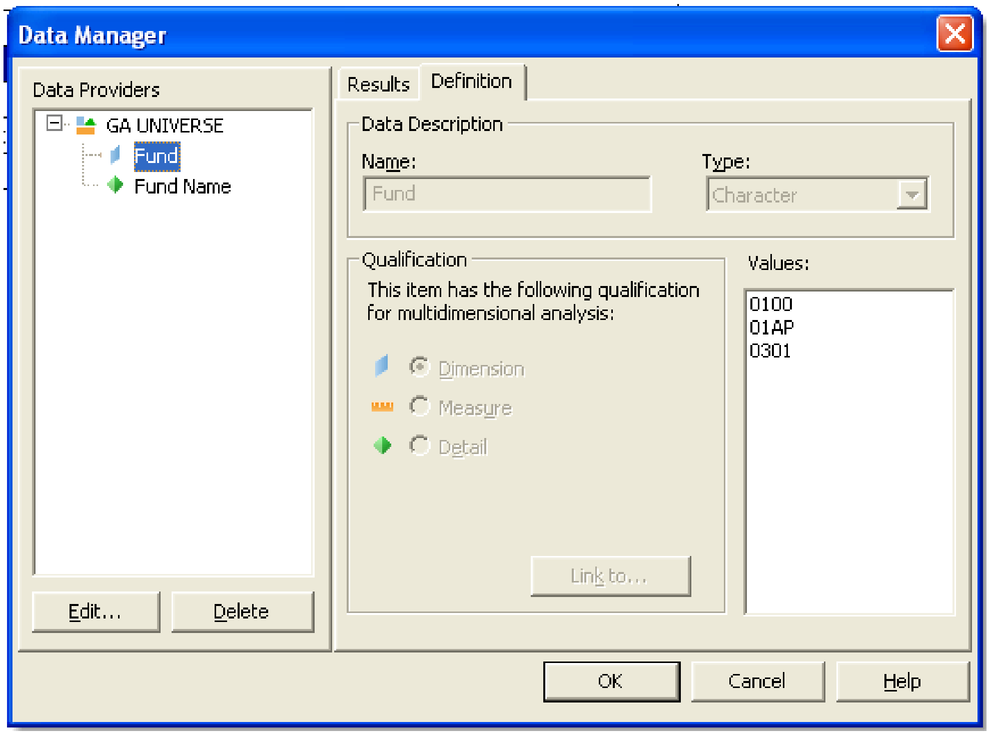
Select the universe on which you want to run the query.

Universe	Repository	File Name
Document Phase Univ...	/Universe	Document Phase Univ.
ePay	/Universe	ePay
Fixed Assets	/Universe	Fixed Assets
Geographic Location	/Universe	Geographic Location
Inventory	/Universe	Inventory
KY Capital Projects	/Universe	KY Capital Projects

Data Providers: When you click on a particular object in the data provider, for instance, if you click on *Fund*, the *Definitions* section will display the object's definitions. The object *Name* and *Type* are displayed. *Fund* is a *Character Type*.

Also, you can see that *Fund* is a *Dimension* object and not a *Measure* or a *Detail*. The *Qualifications* are grayed out or disabled because you may not change the *Qualification* of an object in the *Data Manager*.

This section is where you will go to *Link* data providers if you have multiple data providers. Linking, or joining *Universes*, will be discussed later in the manual.


Data Manager
Data Providers
GA UNIVERSE
Fund
Fund Name
Edit...
Delete
Results
Definition
Data Description
Qualification
Values:
Link to...
OK
Cancel
Help

Name: Fund

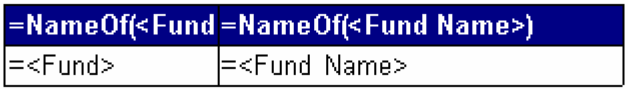
Type: Character

This item has the following qualification for multidimensional analysis:

● Dimension
○ Measure
○ Detail

Values:
0100
01AP
0301

The S*tructure* icon will show you the *Structure View* of your report.



=NameOf(<Fund	=NameOf(<Fund Name>)
=<Fund>	=<Fund Name>

> ***NOTE:*** It is best practice to work in *Structure View* once you start making formatting changes to your report. By doing so, you can easily identify changes you make to the structure of your table or sections.

The *Page Layout* icon will show you the report header, footer and margins.

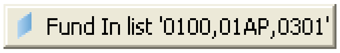
Editing a Query

Scenario: Your boss has requested a report that shows *Expenditures and Revenues to Date* that excludes *General Fund* and *Capital Projects* data. Instead of reinventing the wheel, you may make a few modifications to the query we have already built.

To add, delete objects or modify conditions in your query you would:

24. Click the ***Edit Data Provider*** icon .

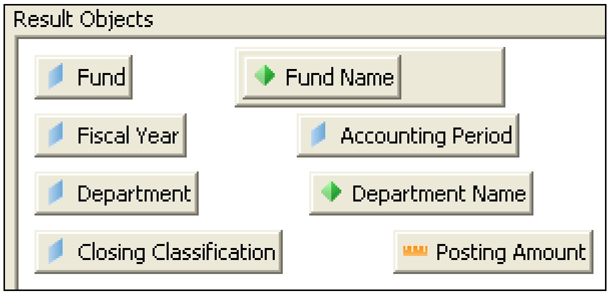
If you have multiple data providers you would select the one you want to edit. In this instance, we only have one data provider so clicking the icon will be take you back to the *Query Panel.*

25. Delete the **condition**: 

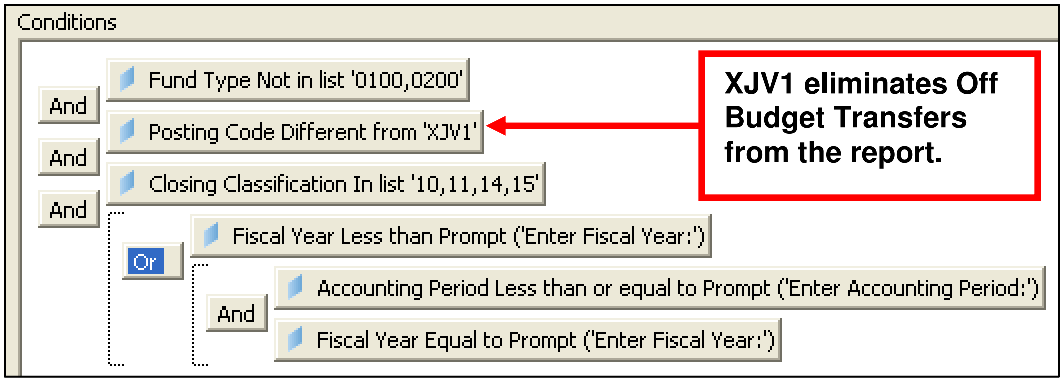
Fund In list '0100,01AP,0301'

26. In addition to *Fund* and *Fund Name*, drag the following objects into the ***Result Objects Panel***:

- Accounting Period > ***Fiscal Year***
- Accounting Period > ***Accounting Period***
- COA-Organization > Organization – Centralized View > ***Department***
- COA-Organization > Organization – Centralized View > Department > ***Department Name***
- Posting Code > ***Closing Classification***
- Basic Accounting Ledger > ***Posting Amount***


Result Objects
Fund
Fund Name
Fiscal Year
Accounting Period
Department
Department Name
Closing Classification
Posting Amount

27. Before running the query, apply some ***Conditions*** so that only certain amount of information is returned.



Conditions

And
- Fund Type Not in list '0100,0200'

And
- Posting Code Different from 'XJV1'

And
- Closing Classification In list '10,11,14,15'
- Or
  - Fiscal Year Less than Prompt ('Enter Fiscal Year:')
  - And
    - Accounting Period Less than or equal to Prompt ('Enter Accounting Period:')
    - Fiscal Year Equal to Prompt ('Enter Fiscal Year:')

XJV1 eliminates Off Budget Transfers from the report.

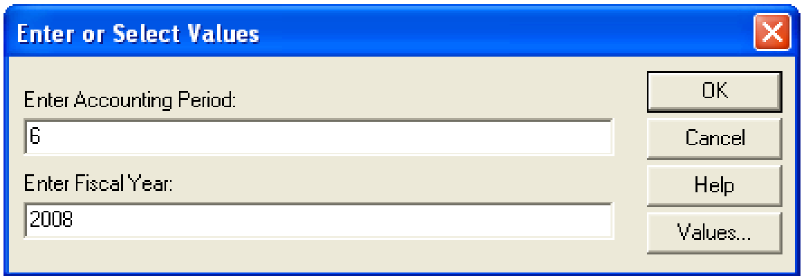
> ***NOTE:*** Double-click on a conjunction (***AND*** or ***OR***) to switch between the two values. Right-click on a conjunction and choose ***Shift Left*** or ***Shift Right*** to rearrange conjunctions.

28. After applying the conditions, click on ***Save and Close*** Save and Close so that the query will not run but will be saved prior to running it.

29. ***Save*** the report to your ***userDocs*** folder as ***Chapter3_Creating a Report—YourName***.

30. ***Refresh*** the report.

31. **Enter** the following information for the **prompts**:



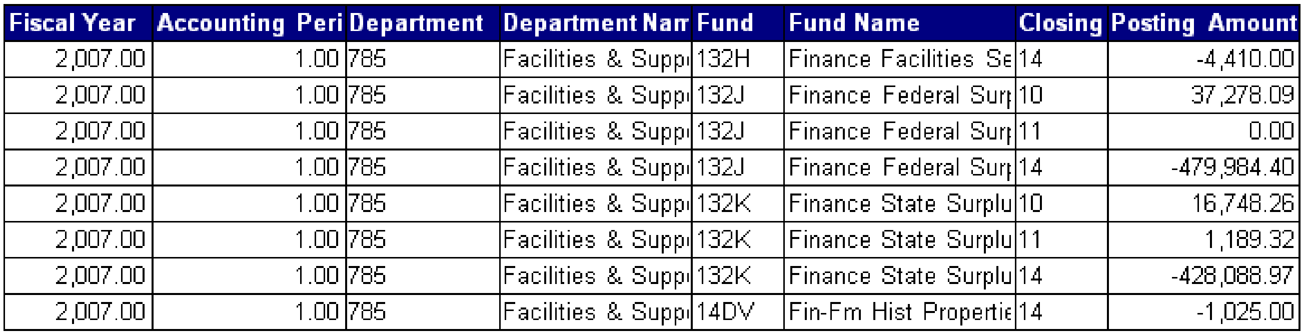
Enter or Select Values

Enter Accounting Period: 6

Enter Fiscal Year: 2008

32. Your *table layout* will be similar to the results shown below (after you rearrange the columns).

Based on the conditions we used in the query, you should see all *Accounting Periods* for *Fiscal Year 2007* and *Accounting Periods* 1 – 6 for *Fiscal Year 2008*.



Fiscal Year	Accounting Peri	Department	Department Nam	Fund	Fund Name	Closing	Posting Amount
2,007.00	1.00	785	Facilities & Supp	132H	Finance Facilities Se	14	-4,410.00
2,007.00	1.00	785	Facilities & Supp	132J	Finance Federal Sur	10	37,278.09
2,007.00	1.00	785	Facilities & Supp	132J	Finance Federal Sur	11	0.00
2,007.00	1.00	785	Facilities & Supp	132J	Finance Federal Sur	14	-479,984.40
2,007.00	1.00	785	Facilities & Supp	132K	Finance State Surplu	10	16,748.26
2,007.00	1.00	785	Facilities & Supp	132K	Finance State Surplu	11	1,189.32
2,007.00	1.00	785	Facilities & Supp	132K	Finance State Surplu	14	-428,088.97
2,007.00	1.00	785	Facilities & Supp	14DV	Fin-Fm Hist Properti	14	-1,025.00

33. *Save* your report again with data so that when you open it next time, you will not have to refresh the report.

> ***NOTE:*** When publishing or saving reports, it is best practice to purge all data from the report and then save the report. If data needs to be kept in the report, first save the report as a *PDF* file to a shared network location, then purge the report of data and save the report to *Shared, Personal* or *Inbox* documents. See *Appendix C: Purging Data from Reports Prior to Saving/Publishing* for more information regarding purging reports.

34. *Close* your report and **complete *Exercise 1***.

This page intentionally left blank.

Exercise 1: Creating a Report

Review

1) The data warehouse reflects data as of
   - **a)** The current business day
   - **b)** The previous business day

2) You have ___ tries to log in to Desktop Intelligence before your account is locked out. ________ the CRC to have your account unlocked.

3) A universe is a collection of ___________________________, which represent fields in a database.

4) Classes are ____________________________ of *Universe Objects*.

5) Name the three different types of *Universe Objects*:
   - **a)**
   - **b)**
   - **c)**

6) ***True*** or ***False*** Drag the folder of the object you want into the *Result Objects Panel.*

7) When building a condition in a query, you need to
   - **a)**
   - **b)**
   - **c)**
   - **d)**

8) Name the 4 most used icons in the *Report Panel*
   - **a)**
   - **b)**
   - **c)**
   - **d)**

Hands on Instructions

Task Overview

Use the **General Accounting** universe to create a simple report containing ***Expenditures*** and ***Revenues***.

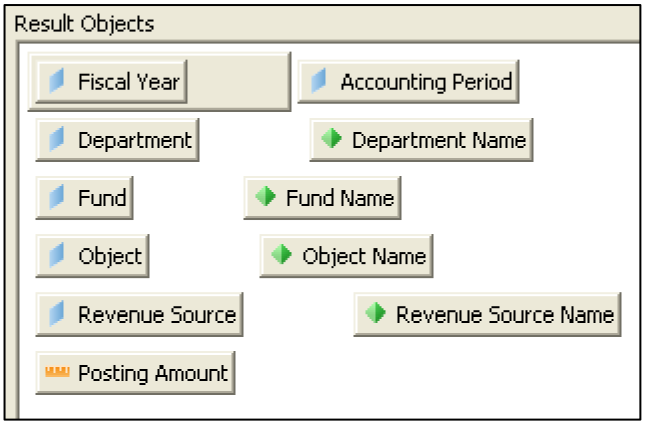
For this exercise, you will create the query and report that will be the basis of a slightly more complex report that you will create in future exercises.

This report will use prompts but we will retrieve data for ***Fiscal Year 2008*** and ***Accounting Period 6*** only.

Procedures

1) Open and log in to **Desktop Intelligence**.
2) When the *New Report Wizard* comes up, **Click *Generate a Standard Report***.
3) Click on "***Begin >***".
4) Click ***Universe*** for *Select the way you want to access data.*
5) Click "***Next >***".
6) Select ***General Accounting Universe***.
7) Click on "***Finish***".
8) Drag the following objects into the ***Result Objects Panel***:

Fiscal Year
Accounting Period
Department
Department Name
Fund
Fund Name
Object
Object Name
Revenue Source
Revenue Source Name
Posting Amount


Result Objects
Fiscal Year
Accounting Period
Department
Department Name
Fund
Fund Name
Object
Object Name
Revenue Source
Revenue Source Name
Posting Amount

NOTE: Remember to use the *Posting Amount* from the *Basic Accounting Journal* because you are not pulling document level detail and you are not using *Chart of Account* elements such as *Activity, Function* or *Reporting* in your query.

9) Set up the following ***Conditions*** using ***And***:

Accounting Period **Equal to Prompt** *Enter Accounting Period:*

And

Fiscal Year **Equal to Prompt** *Enter Fiscal Year:*

And

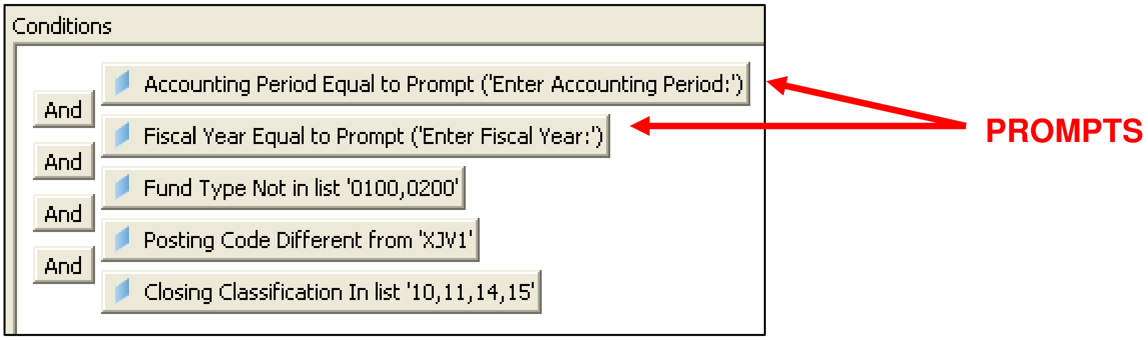
F*und Type* **Not in list** *0100,0200*

And

Posting Code **Different from** XJV1

And

Closing Classification **In list** 10,11,14,15


Conditions

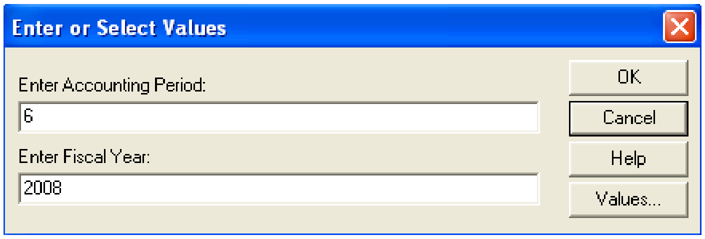
Accounting Period Equal to Prompt ('Enter Accounting Period:')
And
Fiscal Year Equal to Prompt ('Enter Fiscal Year:')
And
Fund Type Not in list '0100,0200'
And
Posting Code Different from 'XJV1'
And
Closing Classification In list '10,11,14,15'

PROMPTS

10) ***Run*** the query and in the **prompts input**:

a) *Enter Accounting Period:* **6**

b) *Enter Fiscal Year*: **2008**

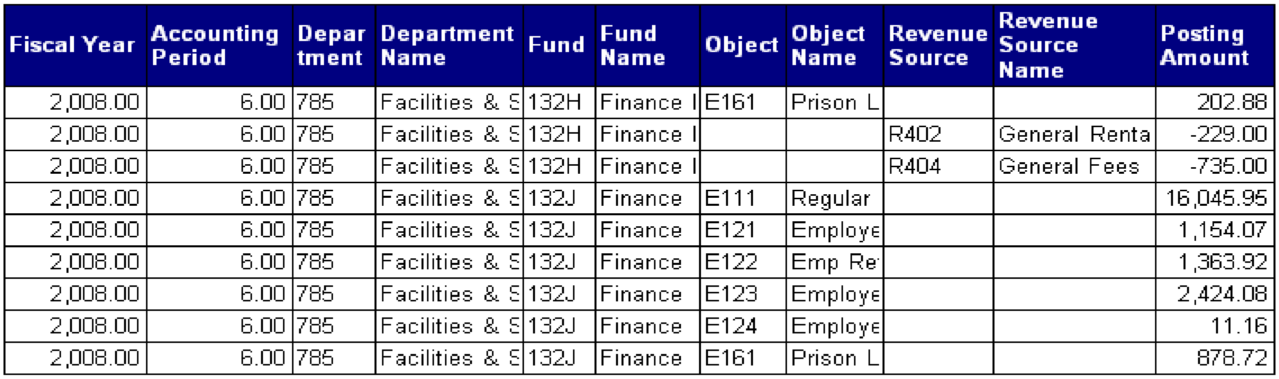

Enter or Select Values

Enter Accounting Period: 6

Enter Fiscal Year: 2008

11) Your query should return a table layout similar to the figure below.

In order to fit the table on the page, *Word Wrap* was used on the headings. Your results will look slightly different.



Fiscal Year	Accounting Period	Depar tment	Department Name	Fund	Fund Name	Object	Object Name	Revenue Source	Revenue Source Name	Posting Amount
2,008.00	6.00	785	Facilities & S	132H	Finance I	E161	Prison L			202.88
2,008.00	6.00	785	Facilities & S	132H	Finance I			R402	General Renta	-229.00
2,008.00	6.00	785	Facilities & S	132H	Finance I			R404	General Fees	-735.00
2,008.00	6.00	785	Facilities & S	132J	Finance	E111	Regular			16,045.95
2,008.00	6.00	785	Facilities & S	132J	Finance	E121	Employe			1,154.07
2,008.00	6.00	785	Facilities & S	132J	Finance	E122	Emp Re			1,363.92
2,008.00	6.00	785	Facilities & S	132J	Finance	E123	Employe			2,424.08
2,008.00	6.00	785	Facilities & S	132J	Finance	E124	Employe			11.16
2,008.00	6.00	785	Facilities & S	132J	Finance	E161	Prison L			878.72

12) ***Save*** your report as ***Exercise1_ExpRevRpt—Your Name.***

13) ***Close*** your report.

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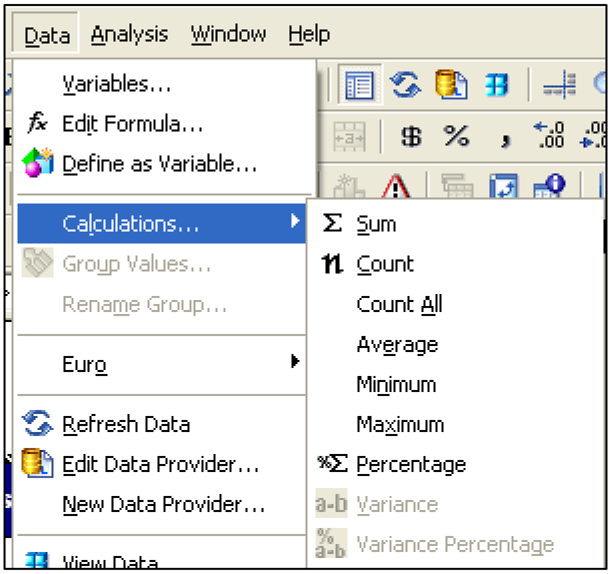
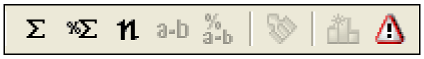
Chapter 4: Simple Calculations


Data
Analysis
Window
Help
Variables…
Edit Formula…
Define as Variable…
Calculations…
Group Values…
Rename Group…
Euro
Refresh Data
Edit Data Provider…
New Data Provider…
View Data
Sum
Count
Count All
Average
Minimum
Maximum
Percentage
Variance
Variance Percentage

Desktop Intelligence has standard calculation functions that enable you to make quick calculations on the data in reports. These calculations are available directly from the menu bar. The most commonly used calculations are also available on the Report toolbar.

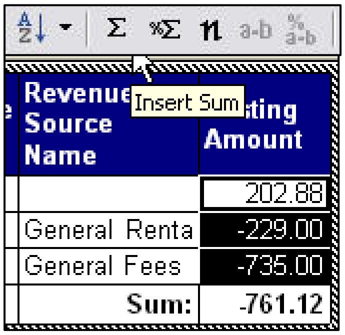


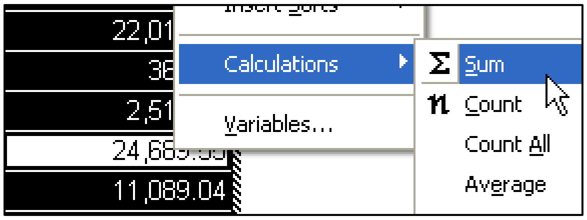
To…	Choose…
Calculate the sum of the selected data.	Sum
Count all rows for a Measure object. Count distinct values for a Dimension or Detail object.	Count
Count the number of rows in the body including all duplicate and empty rows.	Count All
Calculate the average of the selected data.	Average
Display the maximum value of the selected data.	Maximum
Display the minimum value of the selected data.	Minimum
Display the selected data as a percentage.	Percentage
Calculate the difference between two selected values.	Variance
Calculate the difference between two selected values and display it as a percentage.	Variance percentage

Insert Sum

The *Insert Sum Simple Calculation* allows you to quickly calculate totals in your report. Click on the data in the field that you wish to sum and then click on the *Insert Sum* icon on the toolbar.

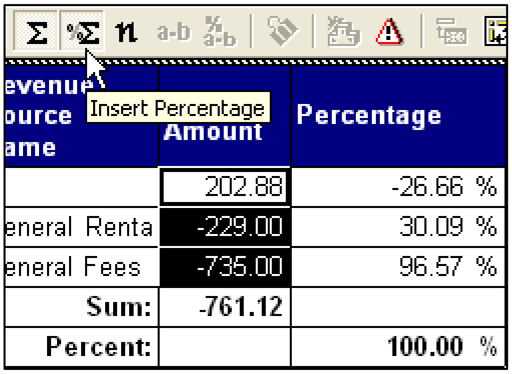
Another method of inserting the sum would be to click on the data, right click, select *Calculations*, and then select *Sum*. Or you may select it from the menu bar under *Data > Calculations.*

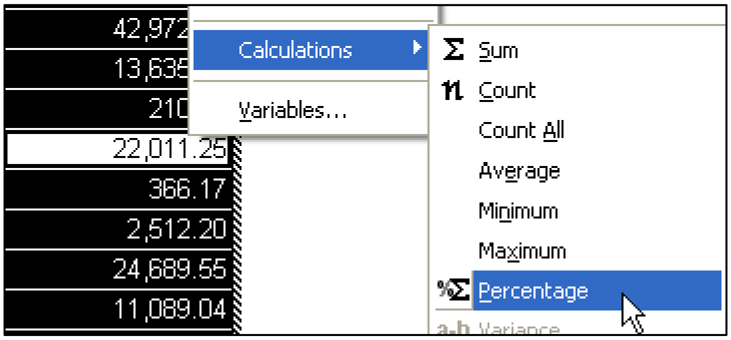

Insert Sum
Revenue Source Name
ting Amount
202.88
General Renta
-229.00
General Fees
-735.00
Sum:
-761.12


22,01
38
2,51
24,689.55
11,089.04
Calculations
Variables...
Sum
Count
Count All
Average

Insert Percentage

Insert Percentage will quickly calculate the percentage of an amount that you have already summed. Click on the data in the summed column and select *Insert Percentage* either from the toolbar, by right clicking or by selecting it from *Data > Calculations* on the menu bar.

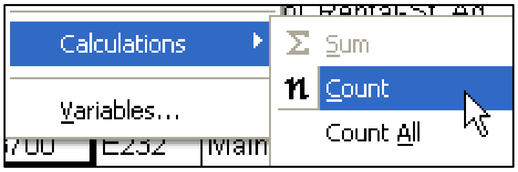

Insert Percentage
evenue ource ame
Amount
Percentage
202.88
-26.66 %
eneral Renta
-229.00
30.09 %
eneral Fees
-735.00
96.57 %
Sum:
-761.12
Percent:
100.00 %

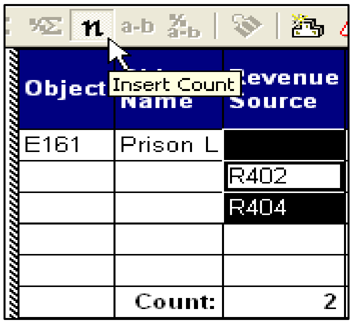

42,972
13,635
210
22,011.25
366.17
2,512.20
24,689.55
11,089.04
Calculations
Variables...
Sum
Count
Count All
Average
Minimum
Maximum
Percentage
Variance

Insert Count

Count will count all rows for a *Measure Object*, but only distinct values for a *Dimension* or *Detail Object. Count All* will count the number of rows in the report including all duplicate and empty rows. For example, if you return only 5 funds in a report but have 10 rows for each fund, *Count* will return 5 because it counts each *Fund* distinctively, but *Count All* will return 50 because it counts every instance of *Fund* in the report.

Click on data you wish to count, select *Insert Count* either from the toolbar, by right clicking or by selecting from *Data > Calculations* on the menu bar.

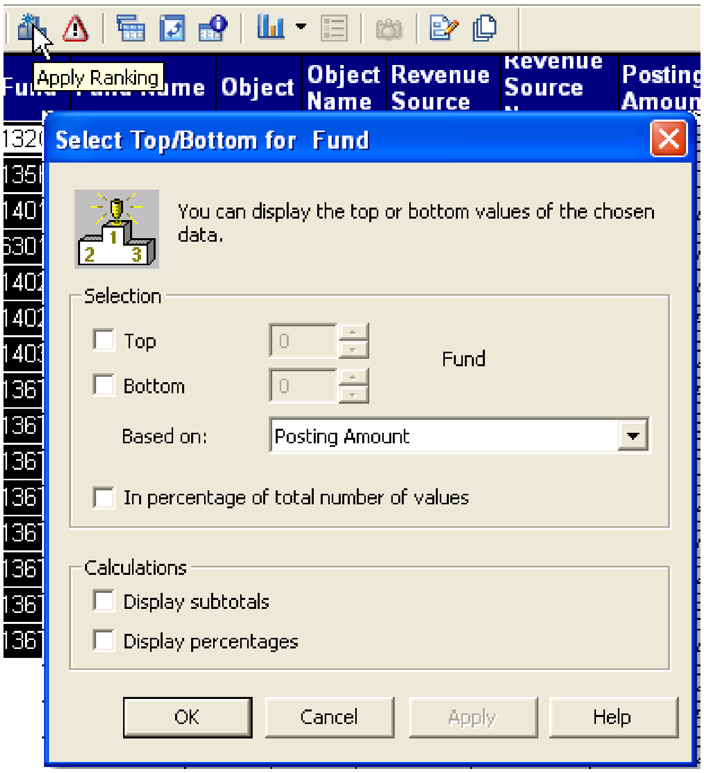

Calculations
Variables...
Sum
Count
Count All


Insert Count
Object
Name
evenue Source
E161
Prison L
R402
R404
Count:
2

Ranking

Ranking enables you to look at the largest and smallest numbers in a report. Like filtering, it hides the data you do not want to display. Desktop Intelligence does not delete the data from the report; you can view it again whenever you like by removing the ranking.

To apply a ranking, click on the data in the column containing the measure you wish to rank and clink on the *Ranking* button.



Select Top/Bottom for Fund

You can display the top or bottom values of the chosen data.

Selection

☐ Top 0

☐ Bottom 0

Fund

Based on: Posting Amount

☐ In percentage of total number of values

Calculations

☐ Display subtotals

☐ Display percentages

To…	Do This…
Select the largest *n* values,	Click *Top* and select the value of *n*. (BusinessObjects selects 3 by default when you click *Top*.)
Select the smallest *n* values,	Click *Bottom* and select the value of *n*. (BusinessObjects selects 3 by default when you click *Bottom*.)
Select the top *n*% of values,	Click *Top*, click *In percentage of total number of values*, then select the value of *n*.
Select the bottom *n*% of values,	Click *Bottom*, click *In percentage of total number of values*, then select the value of *n*.
Display Subtotals relating to the values that appear in the report and the values that are omitted from the report,	Click *Display subtotals.*
Display percentages relating to the values that appear in the report and the values that are omitted from the report,	Click *Display percentages*.
Select the measure on which the ranking is based,	Choose the measure in the Based On combo box.

Alerters

You may highlight data in a Desktop Intelligence report using *Alerters*. *Alerters* use special formatting to make data that fits certain conditions stand out from the rest of the data. This helps draw attention to trends and exceptions in report data.

1) Open ***Chapter3_Creating a Report—YourName***.
2) ***Save*** the report as ***Chapter4_Alerters—YourName.***

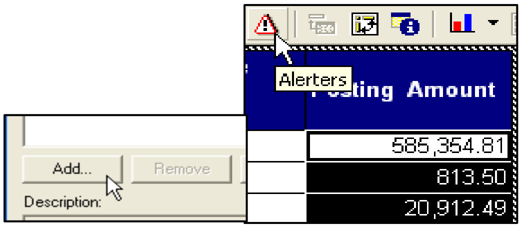
There are 4 steps involved in creating an *Alerter*:

a) Select the data you want to use.
b) Name and describe the *Alerter*.
c) Define the range of values.
d) Define how the *Alerter* will be displayed in the cell.

Once you have created an *Alerter* you may apply, hide, display, edit or delete it.

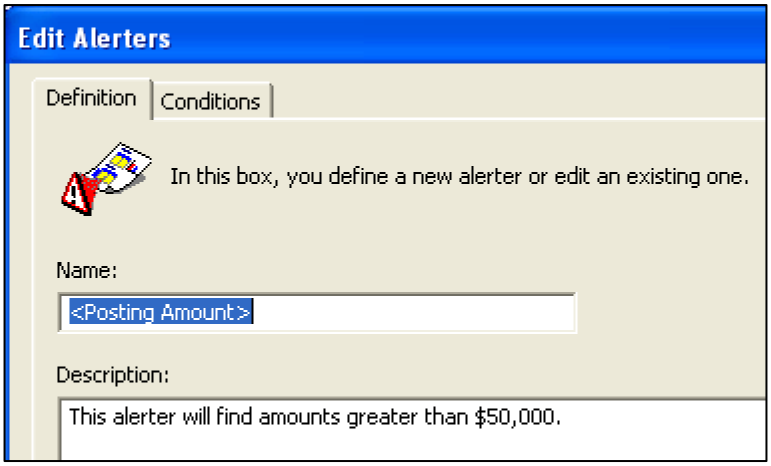
Step 1: Select the *Data*

a) In the report, click a **cell**, **row** or **column** of data.
b) Click ***Alerters*** on the *Format* menu or click the icon on the *Report* toolbar.
c) In the *Alerters* dialog box that appears, click ***Add***.



Step 2: Name and describe the *Alerter*

b) In the *Name* box in the *Definition* tab, type a **name** for the *Alerter*.
c) In the *Description* box, type a **help text** on the alerter to remind you and others what the *Alerter* is set to highlight.
d) Click the ***Conditions*** tab.



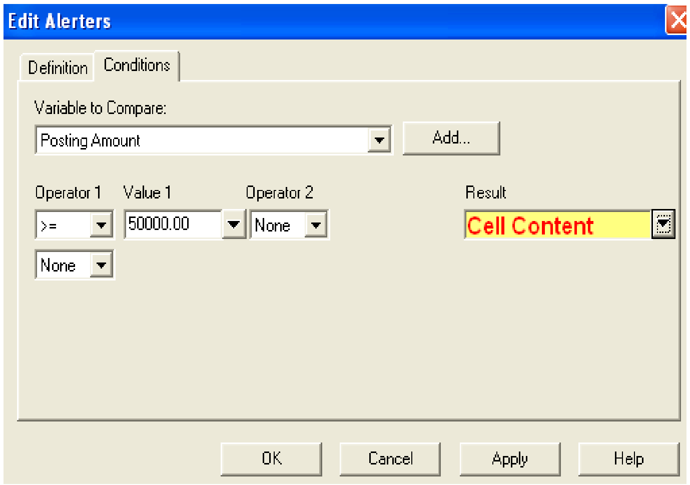
In this box, you define a new alerter or edit an existing one.

Name: <Posting Amount>

Description: This alerter will find amounts greater than $50,000.

Step 3: Set the *Conditions*

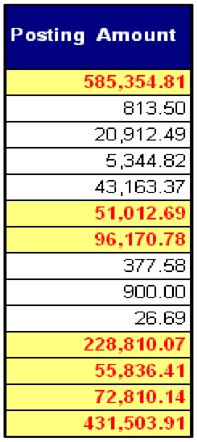
a) Choose a **variable** from the *Variable to Compare* listbox.
b) Choose an ***Operator*** from the *Operator 1* listbox.
   - Type a **value** (number, character or date), or
   - Click the **down arrow button** to the right of the *Value 1* listbox, then click *Variables* or *List of Values*. Select a **variable** or a **value**.
c) If *Operator 1* requires the use of a second operator, click the ***Operator*** to use in the *Operator 2* box.
d) Click **inside** the ***Value 2* box** and **repeat *Step 2***.



Variable to Compare: Posting Amount

Operator 1: >=
Value 1: 50000.00
Operator 2: None
Result: Cell Content

None



Posting Amount
585,354.81
813.50
20,912.49
5,344.82
43,163.37
51,012.69
96,170.78
377.58
900.00
26.69
228,810.07
55,836.41
72,810.14
431,503.91

Step 4: Set the *Formatting*

a) Click the **arrow** next to the *Cell Content* box and a shortcut menu will appear.
b) To have the *Alerter* display text, click ***Text***.
c) Type the **text**, then click ***OK***.
d) To have the *Alerter* display a variable or a formula, click ***Variables***.
e) To format the cell contents, click ***Format***.
f) In the *Cell Format* box, **format the text**, then click ***OK***.
g) Click ***OK***, to apply the *Alerter* and return to the *Edit Alerters* dialog box.

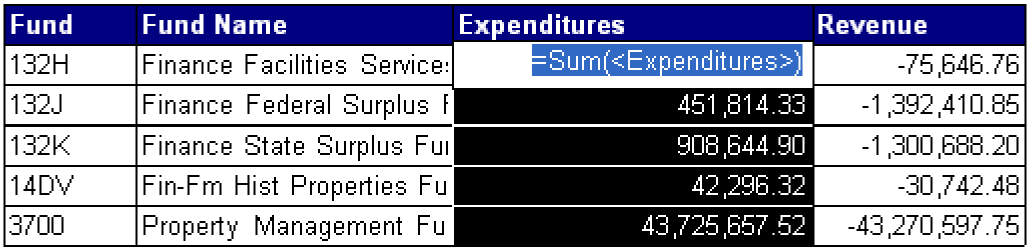
Chapter 5: Formulas and Variables

Sometimes the simple calculations offered do not meet your analysis needs. In this case, you may need to create custom calculations such as formulas or variables. Formulas and variables are very important because they are used in almost every cell in a report.

What is a formula? *Formulas are sentences that can be evaluated.* Some are very simple and others are very complex. However, all are logical and follow certain rules. All formulas begin with an equal sign (=). The equal sign tells Desktop Intelligence to evaluate the formula instead of just displaying the text. *Variables are simply named formulas.* Formulas may be complex so we often give them a name and then refer to the formula by name instead of working with the entire formula.

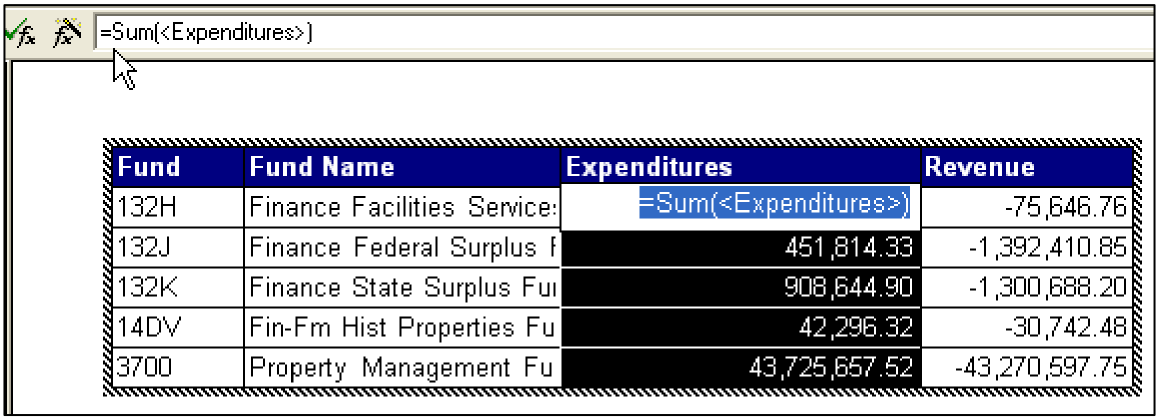
Viewing Formulas in a Report

To view a formula in a report, double-click on the cell that contains the formula. This will place the cell in edit mode and reveal the formula.



Fund	Fund Name	Expenditures	Revenue
132H	Finance Facilities Service:	=Sum(<Expenditures>)	-75,646.76
132J	Finance Federal Surplus F	451,814.33	-1,392,410.85
132K	Finance State Surplus Fu	908,644.90	-1,300,688.20
14DV	Fin-Fm Hist Properties Fu	42,296.32	-30,742.48
3700	Property Management Fu	43,725,657.52	-43,270,597.75

Double clicking on cells to reveal formulas works well for short formulas, but it is difficult to view longer formulas because the cells are often much too narrow to display the entire formula. In the example above, the field was enlarged so that the formula could be displayed. It is easier to view the formula in the *Formula Bar.*



=Sum(<Expenditures>)

Fund	Fund Name	Expenditures	Revenue
132H	Finance Facilities Service:	=Sum(<Expenditures>)	-75,646.76
132J	Finance Federal Surplus F	451,814.33	-1,392,410.85
132K	Finance State Surplus Fu	908,644.90	-1,300,688.20
14DV	Fin-Fm Hist Properties Fu	42,296.32	-30,742.48
3700	Property Management Fu	43,725,657.52	-43,270,597.75

Creating and Editing Formulas and Variables

You may edit a formula by double-clicking on the cell and then modifying the formula directly in the cell. After modifying the formula, press the *Enter* key to save the changes. Modifying formulas in cells may be cumbersome. Another method would be to edit the formula in the *Formula Bar*. After modifying the formula, press the *Enter* key to save the changes. Both of these methods are a quick way to modify or enter a formula; however, both ways require an understanding of formula syntax. Syntax is the structure of a formula. For this reason, Desktop Intelligence has provided a *Formula Editor* that checks the syntax of formulas. Using the *Formula Editor,* if the formula is syntactically correct, Desktop Intelligence will allow the formula to be created. If it is incorrect, Desktop Intelligence will not accept the formula and may or may not give a reason for the improper syntax.

Formulas may be typed directly into the edit field provided or they may be created by double-clicking formula components in the sections below the edit field.

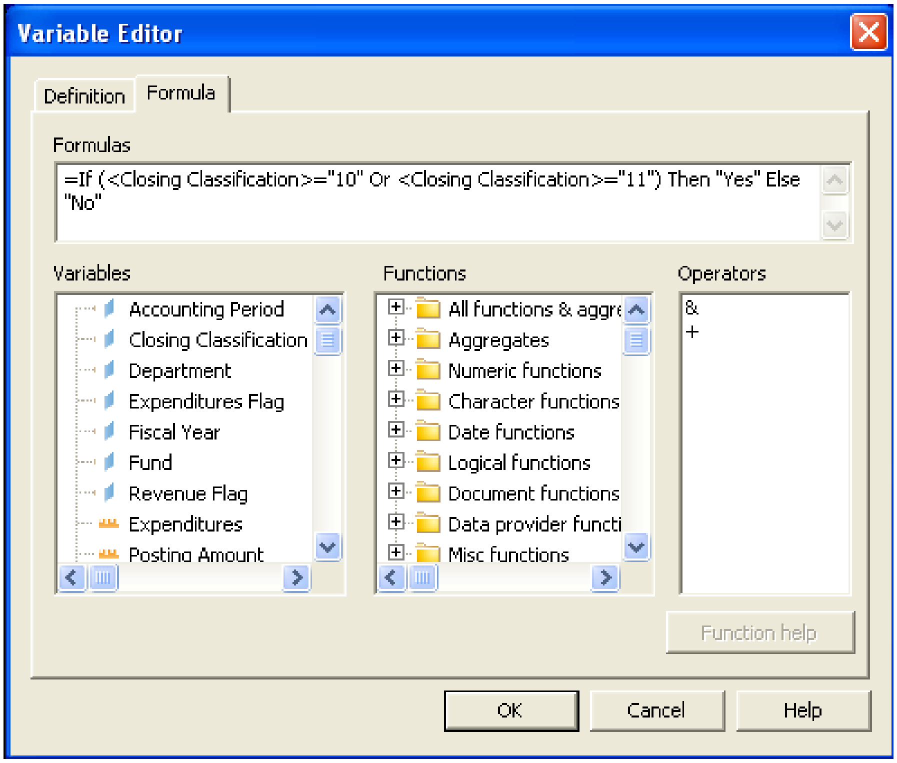
Formula/Variable Editor

Formulas
This is an edit field that allows you to create or modify formulas.

Variables
This section lists all *Universe Objects* that are available in the report. It contains all objects from the *Query Panel* and all variables that are created within the report. It does not contain any formulas that are in the report. If you want to use an existing formula, you will need to make the formula a variable.

Functions
This lists all of the functions that are available in Desktop Intelligence. A few will be covered later in this chapter.

Operators
This section lists all of the operators that can be used within the formula depending where the cursor is in the formula.


Variable Editor
Definition
Formula
Formulas

=If (<Closing Classification>="10" Or <Closing Classification>="11") Then "Yes" Else "No"

Variables
Accounting Period
Closing Classification
Department
Expenditures Flag
Fiscal Year
Fund
Revenue Flag
Expenditures
Posting Amount
Functions
All functions & aggre
Aggregates
Numeric functions
Character functions
Date functions
Logical functions
Document functions
Data provider functi
Misc functions
Operators
&
+
Function help
OK
Cancel
Help

Scenario: After showing the *Expenditures and Revenues to Date* report to your boss, he indicated that he preferred to see the report broken down into totals for *Expenditures* and *Revenues* instead of all amounts in one column. We are going to create two variables, *Expenditures* and *Revenue*, and add them to the table.

1) Open the report titled ***Chapter3_Creating a Report—YourName***.

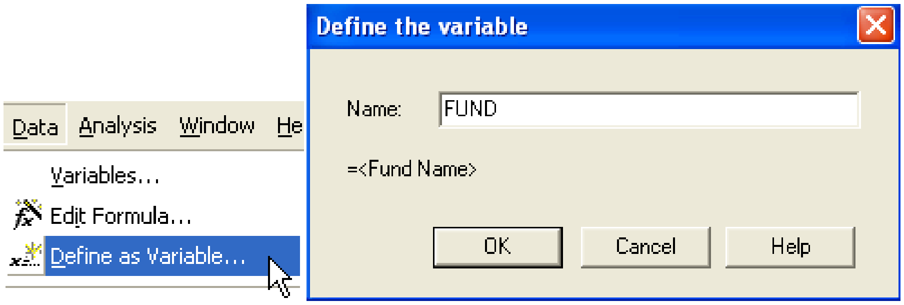
2) Go ahead and ***Save*** the report as ***Chapter5_Formulas-Variables—YourName.*** This way, if you need to start over, you will still have a clean copy of the first report we created.

3) For now, remove ***Closing Classification*** and ***Posting Amount*** from the table.

Before creating the variables in our report, let's cover a few topics related to variables.

Creating Variables

There are several ways to create a variable. One method is to create a variable from an existing formula in a table. This method works well since it allows you to see how the formula will work in the report before it is made into a variable. To create a variable from a formula, click on the cell that contains the formula and select from the menu bar *Data > Define as a Variable*. This will open up the *Define the variable* window which will allow you to name the variable.


Data
Analysis
Window
He
Variables...
Edit Formula...
Define as Variable...
Define the variable
OK
Cancel
Help

Name: FUND

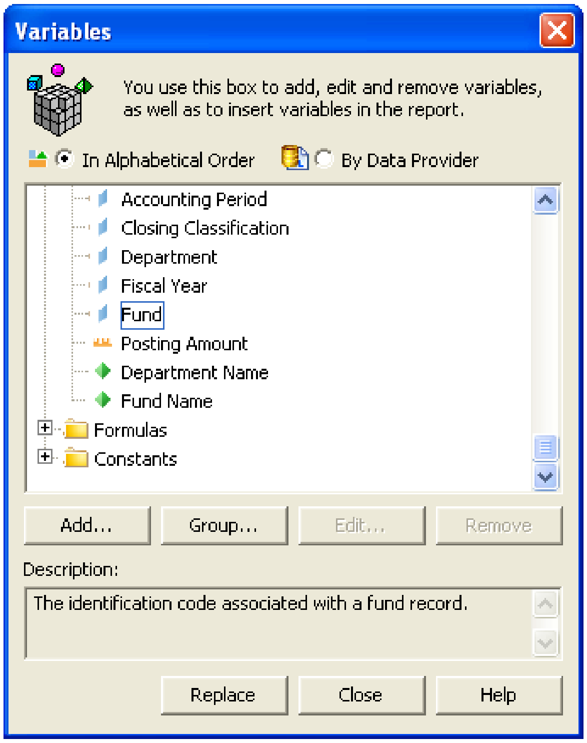
=<Fund Name>

Another method for creating variables is through the *Variables Dialog Box*.

- Click on ***Data*** and then click on ***Variables***.

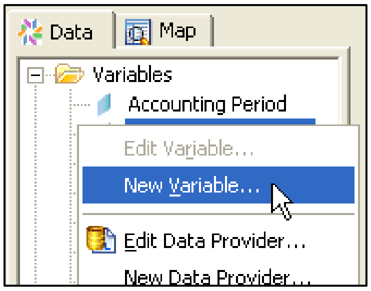
  The *Variables* dialog box allows you to manage variables in a report. It allows you to add, delete, and/or edit local variables.

- Click the ***Add*** button in the *Variables* dialog box.


Variables
In Alphabetical Order
By Data Provider
Accounting Period
Closing Classification
Department
Fiscal Year
Fund
Posting Amount
Department Name
Fund Name
Formulas
Constants
Add...
Group...
Edit...
Remove
Replace
Close
Help

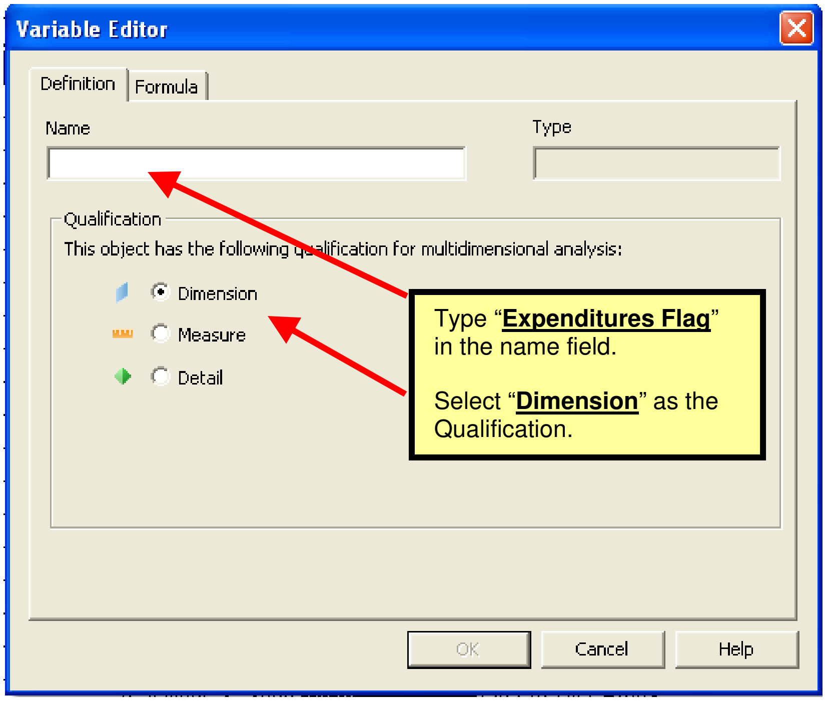
You use this box to add, edit and remove variables, as well as to insert variables in the report.

Description: The identification code associated with a fund record.


Data
Map
Variables
Accounting Period
Edit Variable...
New Variable...
Edit Data Provider...
New Data Provider...

Another way to add a new variable is to right click in the *Report Manager* and select *New Variable.*

The *Variable Editor* dialog box will be displayed. The *Variable Editor* contains two tabs used to create a variable—the *Definition* tab and the *Formula* tab.



Type "**Expendítures Flag**" in the name field.

Select "**Dimension**" as the Qualification.

The *Definition* tab allows you to *Name* and *Qualify* the variable. To name the variable, type a name into the *Name* field. To qualify the variable, select any one of the *Qualifications*. However, any variable that contains a mathematical function in its formula must be a *Measure Object*.

- On the *Definition* tab, name the first variable as ***Expenditures Flag.*** This variable's qualification is going to be *Dimension*.

Using Operators/Functions in Formulas

Every formula has at least one operator, which is the equal operator. Operators allow us to create formulas using the available objects and functions in Desktop Intelligence. Let's look at some of the operators.

Mathematical Operators

The standard mathematical operators are available in Desktop Intelligence (+,-,/,*). They are used in the normal ways, with standard mathematical precedence.

If-Then-Else Operators

The *If-Then-Else* operators allow us to create output based on variables within the report. The general syntax is

= If (Something is True) Then (Do This) Else (Do Something Else)

Using this syntax, we will be creating variables for our report.

There are also instances where we do not care about an *Else* clause in our formulas. If the *Else* clause is excluded from the formula, the formula will return nothing (blank) if the logical part returns false.

You may also nest *If-Then-Else* operators within other *If-Then-Else* operators.

= If (Something is True) Then (Do This) Else (If (Something Else is True) Then (Do That) Else (Do Something Else))

Other operators are *InList* and *IsNull*. The *InList* operator may be used to determine if something is equal to one of the values specified. The *IsNull* function determines whether a constant or variable is null (empty).

Aggregate Functions

Aggregate Functions operate on a set of values. For example; *Sum*, *Average*, *Maximum*, *Minimum* and *Standard Deviation* are all *Aggregate Functions*.

Sum

Syntax:	Sum(number)
Description:	Returns the sum of numeric values
Example:	Revenue
	14,409
	22,221
	33,706
Sum	**70,336**

Average

Syntax:	Average(number, number,…)
Description:	Returns the average of a set of numeric values
Example:	Revenue
	14,409
	22,221
	33,706
Average	**23,445**

Using Min or Max to Remove the #MultiValue Error

#MultiValue errors occur when trying to fit too many values in a context. The most common reason for this error is trying to display a *Dimension* or *Detail* in a freestanding cell. Desktop Intelligence will always give the ***#MultiValue*** error when this is attempted because there is no way for the multiple values that a *Dimension* or *Detail* may represent to be displayed in a single cell. You may use the *Min* or *Max* function to allow you to place a *Dimension* or *Detail* in a freestanding cell.

There are many other *Operators* and *Functions,* too many to go over in training, that are available in Desktop Intelligence to meet your reporting needs. Desktop Intelligence provides help on all *Operators* and *Functions*.

The “Flag” Rule

In creating our variables, we will follow what is referred to as the “flag” rule: *Create a flag for any conditions (as a Dimension), then use the Where clause in the definition of your Measure*. This approach is recommended because it simplifies reports and is compatible with Webi functionality.

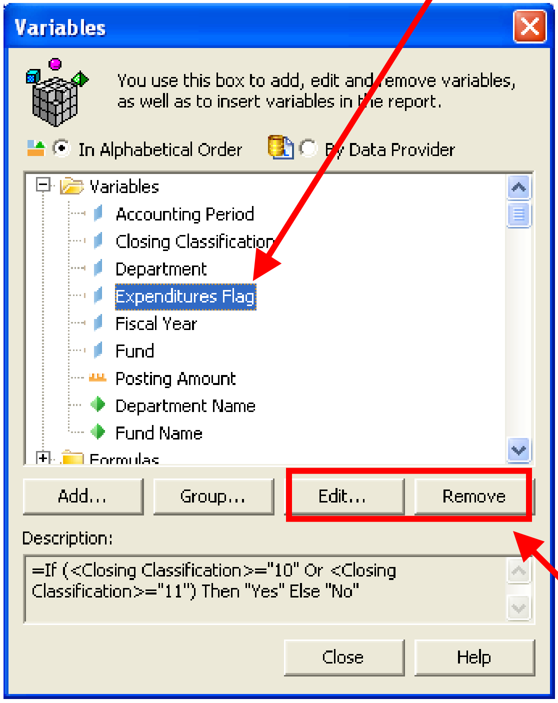
Following the “flag” rule, the variables in our report should contain the following formulas:

Expenditures Flag	**=If (<Closing Classification>="10" or <Closing Classification>="11") Then “Yes” Else “No”**
Expenditures	**=<Posting Amount> Where (<Expenditures Flag>= “Yes”)**
Revenue Flag	**=If (<Closing Classification>="14" or <Closing Classification>="15") Then “Yes” Else “No”**
Revenue	**=<Posting Amount> Where (<Revenue Flag>= “Yes”)**

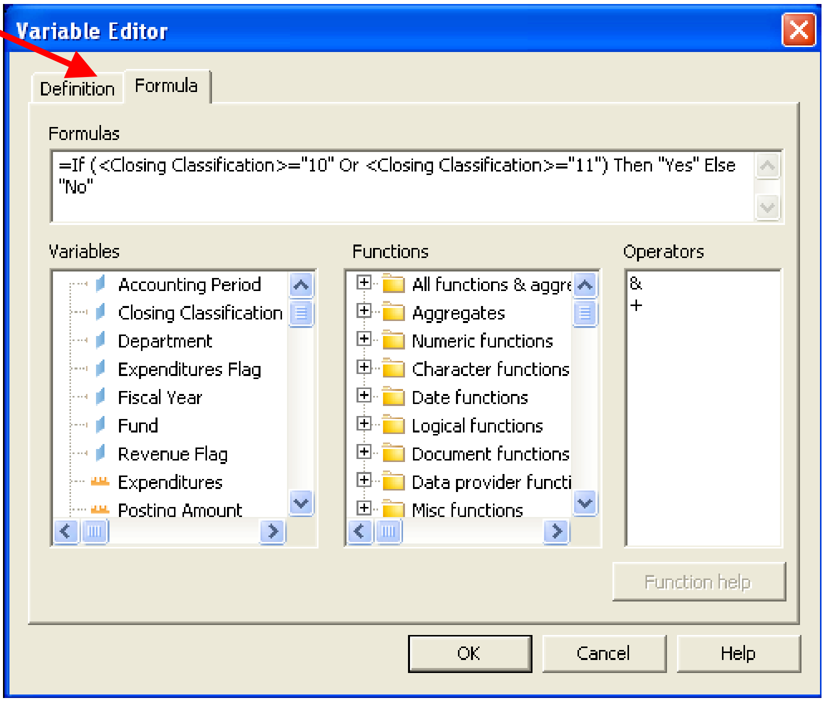
On the *Formula* tab, we are going to define our first formula.

=If (<Closing Classification>="10" or <Closing Classification>="11") Then “Yes” Else “No”

1. Click on ***OK,*** the variable will show up in the *Variables Class* in the *Variables* dialog box.


Variables
You use this box to add, edit and remove variables, as well as to insert variables in the report.
In Alphabetical Order
By Data Provider
Variables
Accounting Period
Closing Classification
Department
Expenditures Flag
Fiscal Year
Fund
Posting Amount
Department Name
Fund Name
Formulas
Add...
Group...
Edit...
Remove
Description:
Close
Help

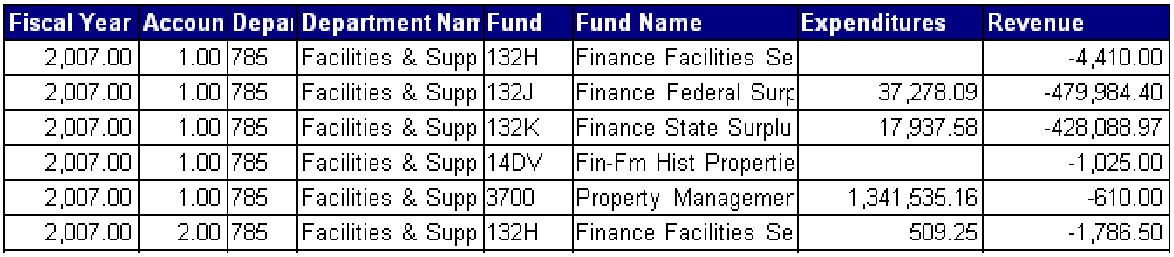
Description: =If (<Closing Classification>="10" Or <Closing Classification>="11") Then "Yes" Else "No"


Variable Editor
Definition
Formula
Formulas
Variables
Accounting Period
Closing Classification
Department
Expenditures Flag
Fiscal Year
Fund
Revenue Flag
Expenditures
Posting Amount
Functions
All functions & aggre
Aggregates
Numeric functions
Character functions
Date functions
Logical functions
Document functions
Data provider functi
Misc functions
Operators
&
+
Function help
OK
Cancel
Help

Formulas: =If (<Closing Classification>="10" Or <Closing Classification>="11") Then "Yes" Else "No"

You may also use the *Variables* dialog box to edit or remove existing variables.

2. Click on ***Add*** again and add the *Expenditures, Revenue Flag,* and *Revenue* variables.
3. Drag both the *Expenditures* and *Revenue* **variables** that you created onto your report after ***Fund Name***.



Fiscal Year	Accoun	Depa	Department Nan	Fund	Fund Name	Expenditures	Revenue
2,007.00	1.00	785	Facilities & Supp	132H	Finance Facilities Se		-4,410.00
2,007.00	1.00	785	Facilities & Supp	132J	Finance Federal Surp	37,278.09	-479,984.40
2,007.00	1.00	785	Facilities & Supp	132K	Finance State Surplu	17,937.58	-428,088.97
2,007.00	1.00	785	Facilities & Supp	14DV	Fin-Fm Hist Propertie		-1,025.00
2,007.00	1.00	785	Facilities & Supp	3700	Property Managemer	1,341,535.16	-610.00
2,007.00	2.00	785	Facilities & Supp	132H	Finance Facilities Se	509.25	-1,786.50

4. ***Save*** the report.

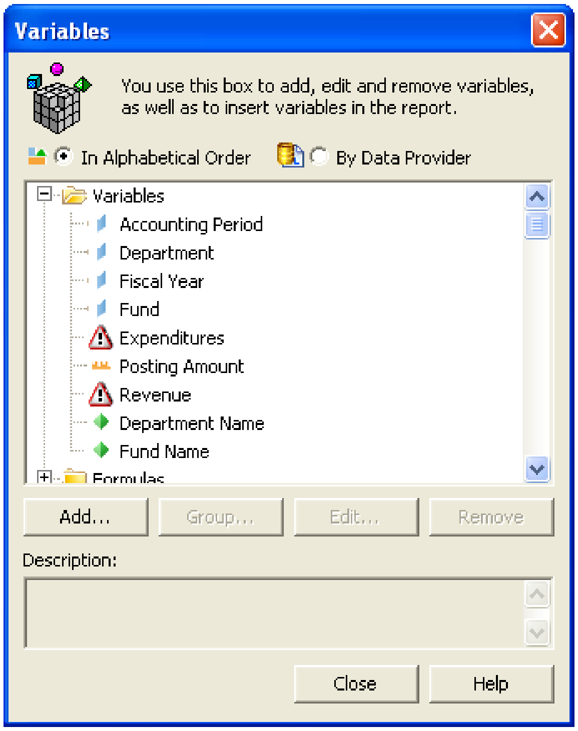
Editing Existing Variables

To edit a variable, select it in the *Variables* dialog box and click on the *Edit* button. This will open the *Variable Editor*. Any of the variable's parameters, including the name, may be changed. If the name is changed, the change will disseminate throughout the report. You may also edit a variable by right-clicking on a variable in the *Report Manager* and selecting *Edit Variable* from the pop-up menu.

Remove Existing Variables

Desktop Intelligence does not automatically remove unused or unwanted variables and formulas from a report. If a variable or formula is no longer valid, the *Variable* dialog will identify this by placing an exclamation mark preceding the formula or variable name. A formula may become invalid for many reasons, but the most common reason is that one of the variables that the formula or variable depends on has been removed from the *Query Panel.*

To delete these unwanted formulas or variables, select the object in the *Variables* dialog box and then click the *Remove* button.


Variables

You use this box to add, edit and remove variables, as well as to insert variables in the report.

● In Alphabetical Order ○ By Data Provider

Variables
Accounting Period
Department
Fiscal Year
Fund
Expenditures
Posting Amount
Revenue
Department Name
Fund Name
Formulas
Add...
Group...
Edit...
Remove
Description:
Close
Help

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Exercise 2: Using Formulas and Variables

Review

1) Name four *Simple Calculations*:

a)

b)

c)

d)

2) What is the difference between *Count* and *Count All*?

3) Ranking enables you to ____.

4) Name the four steps involved in creating an *Alerter.*

a)

b)

c)

d)

5) A *Variable* is simply ____.

6) What are the benefits of using *Variables* instead of inserting a *Formula* into a cell?

7) What are the three steps to building a *Variable*?

a)

b)

c)

Hands on Instructions

Task Overview

Use the report created in **Exercises 1 (*Exercise1_ExpRevRpt—Your Name*)** to practice using variables in a report.

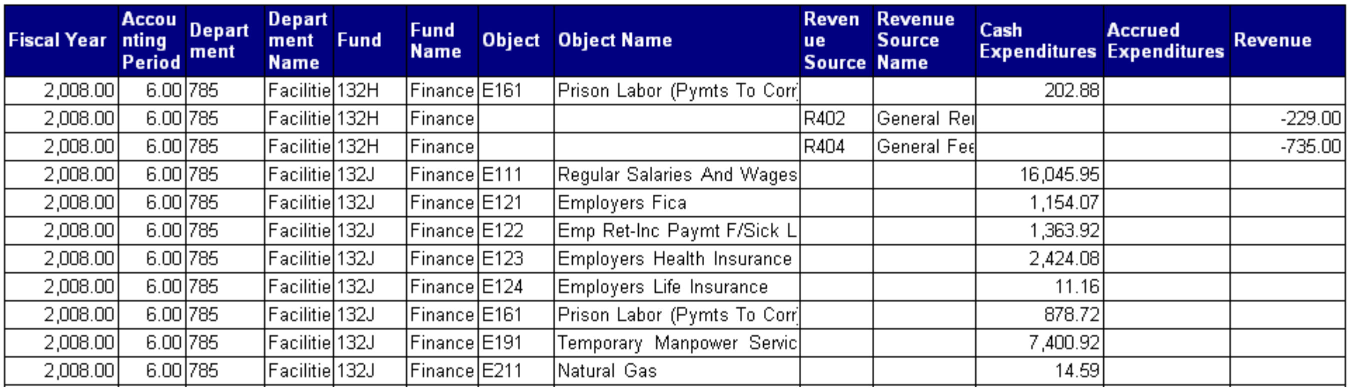
For this exercise, you will modify the query and report built in **Exercise 1** by adding 3 variables to the report.

This report will use prompts but we will retrieve data for *Fiscal Year 2008* and *Accounting Period 6* only.

Procedures

1) Open and log in to **Desktop Intelligence**.
2) Open ***Exercise1_ExpRevRpt—Your Name.***
3) ***Save*** your report as ***Exercise2_FormulasVariables—Your Name.***
4) Edit the query to include ***Closing Classification***.
5) Remove ***Closing Classification*** and ***Posting Amount*** from the table.
6) Create **6 variables** and **add** the non-flag variables to your table:

Accrued Expenditures Flag	**=If <Closing Classification>="11" Then "Yes" Else "No"**
Accrued Expenditures	**=<Posting Amount> Where (<Accrued Expenditures Flag>="Yes")**
Cash Expenditures Flag	**=If <Closing Classification>="10" Then "Yes" Else "No"**
Cash Expenditures	**=<Posting Amount> Where (<Cash Expenditures Flag>="Yes")**
Revenue Flag	**=If (<Closing Classification>="14" or <Closing Classification>="15") Then "Yes" Else "No"**
Revenue	**=<Posting Amount> Where (<Revenue Flag>="Yes")**



Fiscal Year	Accounting Period	Department	Department Name	Fund	Fund Name	Object	Object Name	Revenue Source	Revenue Source Name	Cash Expenditures	Accrued Expenditures	Revenue
2,008.00	6.00	785	Facilitie	132H	Finance	E161	Prison Labor (Pymts To Corr			202.88		
2,008.00	6.00	785	Facilitie	132H	Finance			R402	General Re			-229.00
2,008.00	6.00	785	Facilitie	132H	Finance			R404	General Fe			-735.00
2,008.00	6.00	785	Facilitie	132J	Finance	E111	Regular Salaries And Wages			16,045.95		
2,008.00	6.00	785	Facilitie	132J	Finance	E121	Employers Fica			1,154.07		
2,008.00	6.00	785	Facilitie	132J	Finance	E122	Emp Ret-Inc Paymt F/Sick L			1,363.92		
2,008.00	6.00	785	Facilitie	132J	Finance	E123	Employers Health Insurance			2,424.08		
2,008.00	6.00	785	Facilitie	132J	Finance	E124	Employers Life Insurance			11.16		
2,008.00	6.00	785	Facilitie	132J	Finance	E161	Prison Labor (Pymts To Corr			878.72		
2,008.00	6.00	785	Facilitie	132J	Finance	E191	Temporary Manpower Servic			7,400.92		
2,008.00	6.00	785	Facilitie	132J	Finance	E211	Natural Gas			14.59		

7) ***Save*** your report.
8) ***Close*** your report.

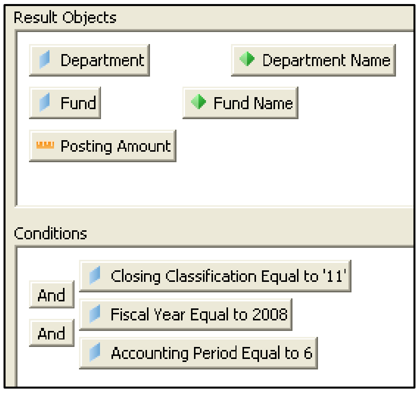
Chapter 6: Simple Formatting

Before moving on to more complex formatting such as *Breaks* and *Sections*, it is important to review simple report formatting such as formatting text, numbers, cells, tables, page layout, etc.

You have complete control over the look of your report. You may move table columns, move freestanding cells, change fonts, colors and other formatting to customize your report. We will start by looking at the formatting options for individual cells.

Cell Formatting

1) Create a new report from the ***General Accounting Universe.***
2) Use ***Department***, ***Department Name***, ***Fund***, ***Fund Name*** and ***Posting Amount*** (*Basic Ledger)*
3) Set conditions for ***Closing Classification = 11***, ***Fiscal Year = 2008*** and ***Accounting Period = 6***.



Result Objects

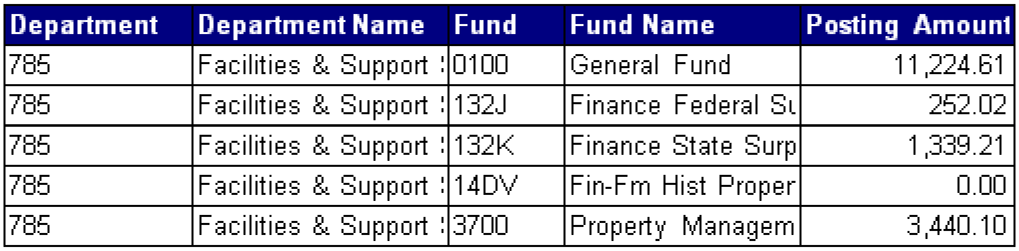
Department
Department Name
Fund
Fund Name
Posting Amount

Conditions

Closing Classification Equal to '11'
And
Fiscal Year Equal to 2008
And
Accounting Period Equal to 6

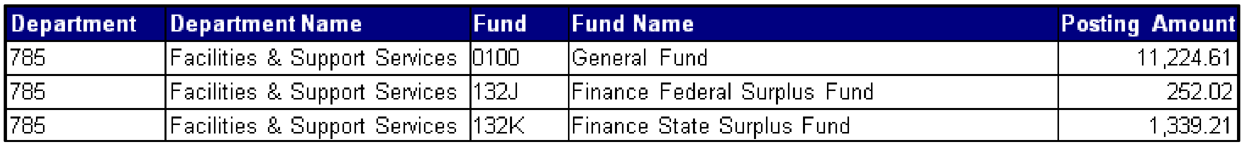
4) **Run** the Query.

Your report should look similar to this.



Department	Department Name	Fund	Fund Name	Posting Amount
785	Facilities & Support :	0100	General Fund	11,224.61
785	Facilities & Support :	132J	Finance Federal Su	252.02
785	Facilities & Support :	132K	Finance State Surp	1,339.21
785	Facilities & Support :	14DV	Fin-Fm Hist Proper	0.00
785	Facilities & Support :	3700	Property Managem	3,440.10

5) **Double-Click** the **right border** of the ***Department Name*** **column** to resize it.
6) **Double-Click** the **right border** of the ***Fund Name*** **column** to resize it.

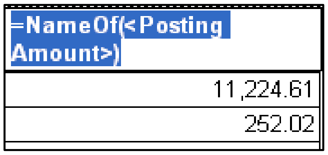


Department	Department Name	Fund	Fund Name	Posting Amount
785	Facilities & Support Services	0100	General Fund	11,224.61
785	Facilities & Support Services	132J	Finance Federal Surplus Fund	252.02
785	Facilities & Support Services	132K	Finance State Surplus Fund	1,339.21

Double-clicking will resize the cell to the largest text in the cell. The other way to resize the cell is to drag the cell border to the size you wish it to be.

Changing Column Headings

When a report is created, Desktop Intelligence uses the names of the objects as the default column headings. These headings may easily be changed to something more appropriate.



=NameOf(<Posting Amount>)

11,224.61

252.02

7) **Double Click** the ***Posting Amount*** **column** *Header Cell*.
The formula for the cell is displayed, *=NameOf(<Posting Amount>)*.

8) **Type** the new heading, ***Expenditure***, and **press** the ***Enter*** key.

> ***NOTE:*** Only the column heading has changed. The object name for the column remains *Posting Amount.*

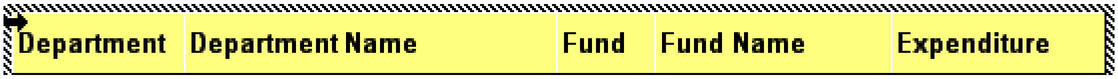
Text Wrapping

If the text within a column exceeds the column's width, and you don't want to widen the column to fit the content on one line, you may have the text wrap to multiple lines within the cell. This is especially useful when the name of an object is much longer than the values for the object. For example, if an object has possible values of *Y* or *N*, the name of the object will be much wider than the values.

We will wrap the text in the column heading. You may wrap the text in the body of the table in the same way.

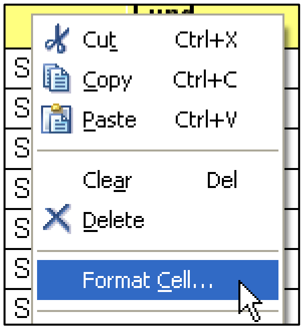
9) Move the **cursor** over the **left edge** of the header row. The mouse cursor will change to a black arrow pointing to the right.

10) Click to **select** the **header row**.



Department	Department Name	Fund	Fund Name	Expenditure

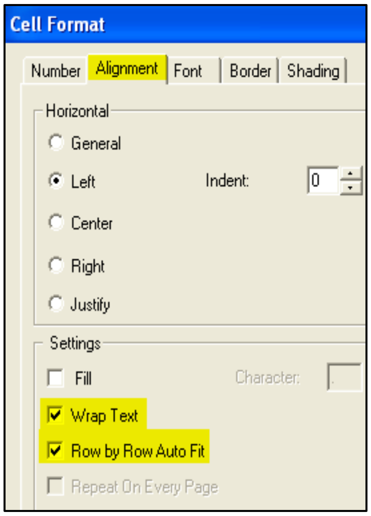
11) **Right-Click** any where on the **header row** to display the pop-up menu.


Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Clear Del
Delete
Format Cell...

12) Select ***Format Cell…***

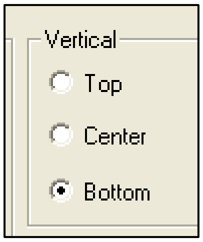
13) Select the ***Alignment*** **tab**.

14) Select ***Wrap Text*** in the *Settings* portion of the dialog box. This will cause the text in the cell to wrap to a new line.


Cell Format
Number
Alignment
Font
Border
Shading
Horizontal
General
Left
Indent:
Center
Right
Justify
Settings
Fill
Character:
Repeat On Every Page

○ General
● Left Indent: 0
○ Center
○ Right
○ Justify
☐ Fill
☑ Wrap Text
☑ Row by Row Auto Fit
☐ Repeat On Every Page

15) Select ***Row by Row Auto Fit***. This will cause the height of each row to increase only if the text for that row has multiple lines.

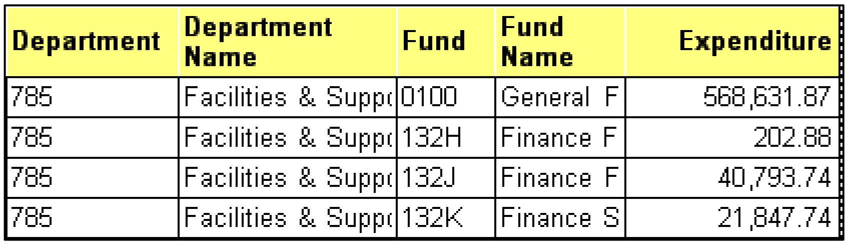


Vertical
○ Top
○ Center
● Bottom

16) Change the ***Vertical*** setting to ***Bottom***.

17) Click ***OK*** to close the dialog box.

If you resize the cells on the table, you will notice that the header cells wrap.



Department	Department Name	Fund	Fund Name	Expenditure
785	Facilities & Suppo	0100	General F	568,631.87
785	Facilities & Suppo	132H	Finance F	202.88
785	Facilities & Suppo	132J	Finance F	40,793.74
785	Facilities & Suppo	132K	Finance S	21,847.74

Custom Border

In the *Format Cell* dialog box, you have the option to change the border on any cell.

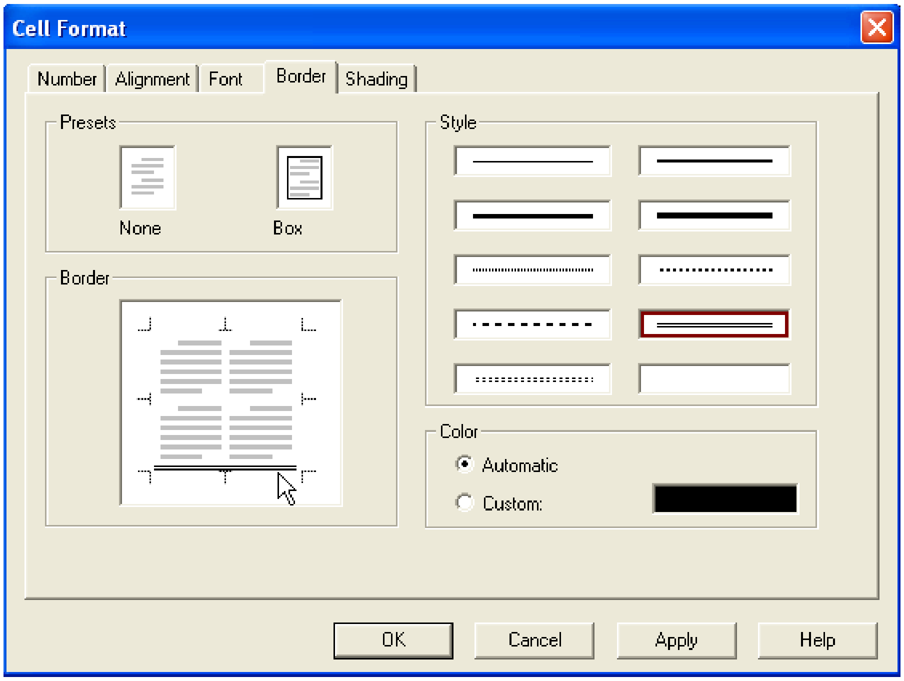
18) Move the **cursor** over the **left edge** of the header row. The mouse cursor will change to a black arrow pointing to the right.

19) Click to **select** the **header row**.

20) **Right Click** and choose ***Format Cell.***

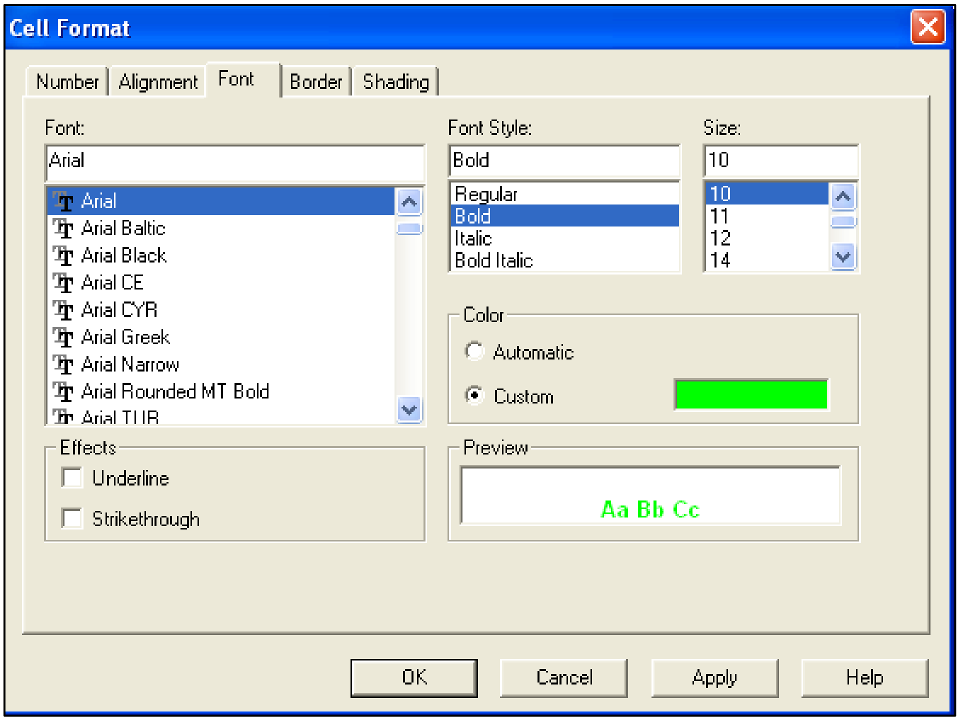
On the *Border* tab, you have four areas available to you to apply border to cells in the table. ***Presets*** allow you to quickly remove or add border around cells. You may manually add different types of border to a cell by first clicking on the ***Style*** you wish to use and then clicking in the ***Border*** section where you wish the border style to be applied. You may also choose the ***Color*** of the border to be used.

21) Change the **border on the header to double lines on the bottom of the cell.**



Custom Font/Shading

The font of a cell may be changed and the cell may be shaded according to your preferences. The *Font* tab in *Format Cell* allows you to choose the *Font, Font Style, Size* and *Color*. You may also add *Effects* such as *Underline* and *Strikethrough*. As you make changes to the font, the *Preview* window allows you to view your changes before *Applying* them to your report.


Cell Format
Number
Alignment
Font
Border
Shading
Arial
Arial Baltic
Arial Black
Arial CE
Arial CYR
Arial Greek
Arial Narrow
Arial Rounded MT Bold
Arial TUR
Regular
Bold
Italic
Bold Italic
10
11
12
14
○ Automatic
OK
Cancel
Apply
Help

Font: Arial

Font Style: Bold

Size: 10

Color: ● Custom 🟩

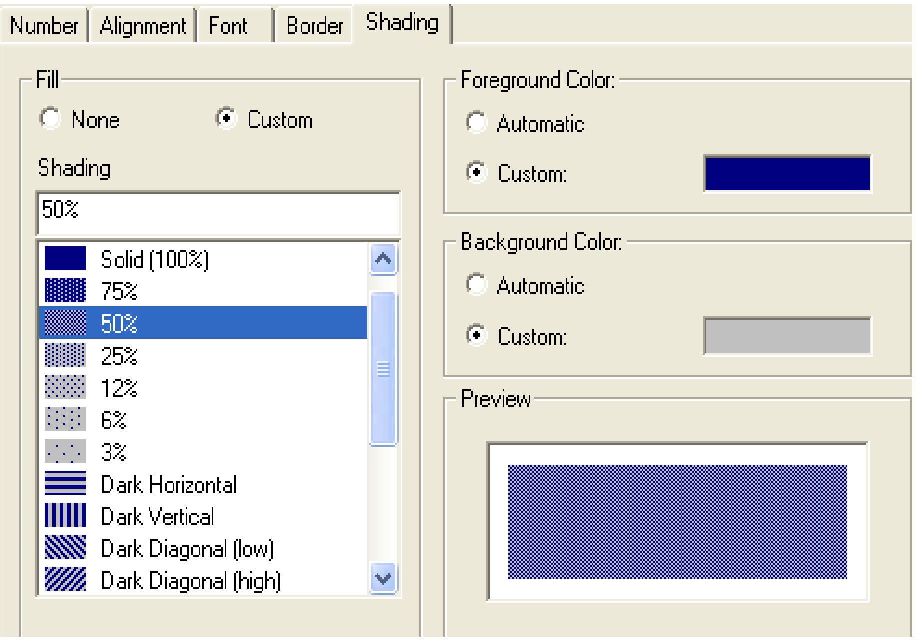
Effects: ☐ Underline ☐ Strikethrough

Preview: Aa Bb Cc

Shading may be applied on the *Shading* tab. You may choose *None* under *Fill* if you do not wish to apply shading to a cell. *Custom* allows you to customize the color and intensity of the cell shading.

You may also pick your color preference for the *Background* and/or *Foreground Color.* Under the *Shading* section, you may choose how dark the shading should be in the cell.

The *Preview* window allows you to visualize the effects prior to applying them to your report.


Number
Alignment
Font
Border
Shading
○ None
Solid (100%)
75%
50%
25%
12%
6%
3%
Dark Horizontal
Dark Vertical
Dark Diagonal (low)
Dark Diagonal (high)
○ Automatic
○ Automatic
Preview

Fill: ● Custom

Shading: 50%

Foreground Color: ● Custom:

Background Color: ● Custom:

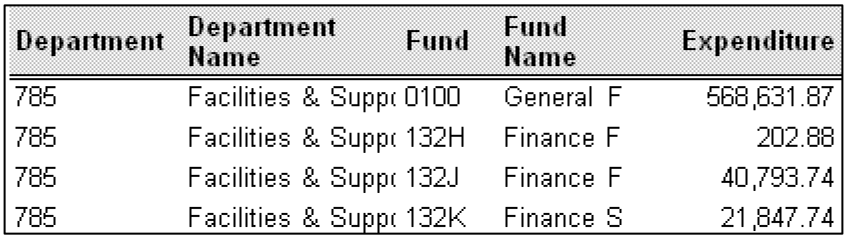
23) Change the **font color** to **black**.

22) Change the **font style** to ***Times New Roman***.

23) Make the ***Font Style Bold*** and the ***Size 12***.

24) Change the ***Shading*** to a **light grey** at ***50%.***

25) Highlight the **data rows** in the table and **remove** the **border**.



Department	Department Name	Fund	Fund Name	Expenditure
785	Facilities & Suppo	0100	General F	568,631.87
785	Facilities & Suppo	132H	Finance F	202.88
785	Facilities & Suppo	132J	Finance F	40,793.74
785	Facilities & Suppo	132K	Finance S	21,847.74

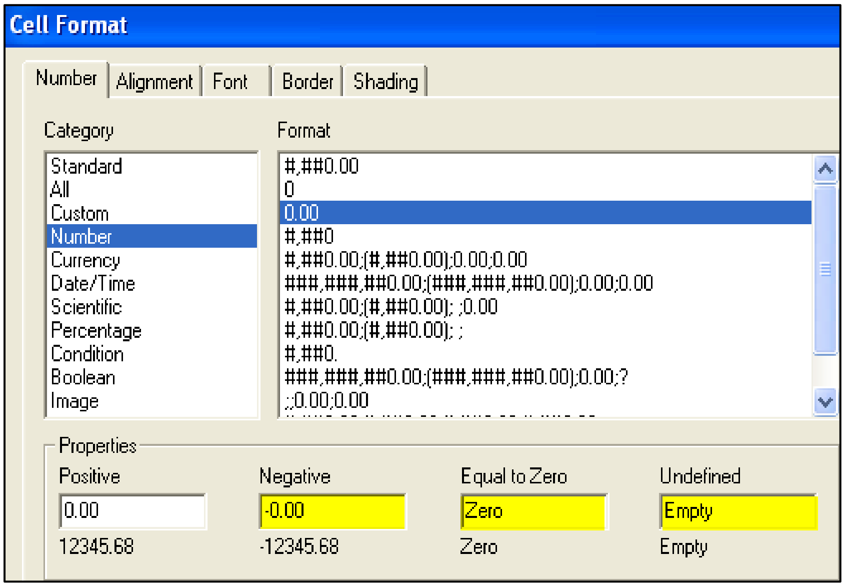
Number Formatting

Number formats may be displayed in many different ways by choosing different formats. There may be different format settings for positive and negative values as well as for zero and null (empty/blank) values.

26) Right Click a value in the ***Expenditure*** **column** to select the column and display the pop-up menu.

27) Select ***Format Cell***… from the pop-up menu.

28) Click the ***Number*** **tab** if it isn't already displayed and Click on ***Number*** under *Category.*


Cell Format
Number
Alignment
Font
Border
Shading
Category
Standard
All
Custom
Number
Currency
Date/Time
Scientific
Percentage
Condition
Boolean
Image
Format
#,##0.00
0
0.00
#,##0
#,##0.00;(#,##0.00);0.00;0.00
###,###,##0.00;(###,###,##0.00);0.00;0.00
#,##0.00;(#,##0.00); ;0.00
#,##0.00;(#,##0.00); ;
#,##0.
###,###,##0.00;(###,###,##0.00);0.00;?
;;0.00;0.00
Properties

Positive: 0.00 — 12345.68
Negative: -0.00 — -12345.68
Equal to Zero: Zero — Zero
Undefined: Empty — Empty

Category allows you to choose the type of formatting you want for the number.

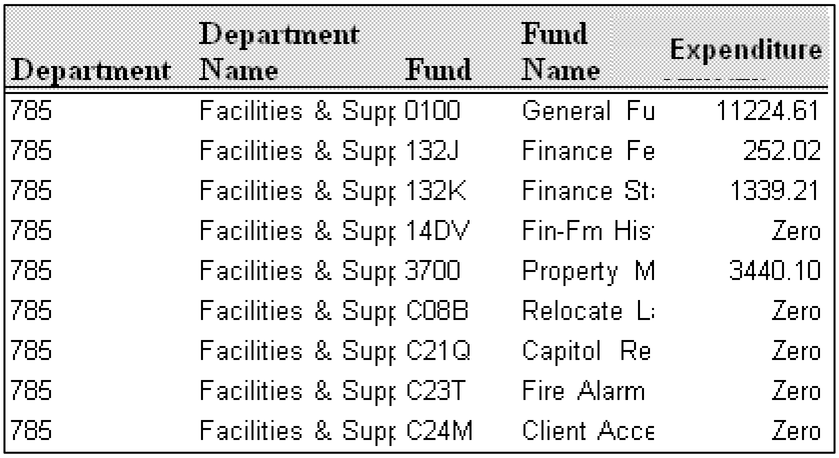
Format allows you to choose how you want the *Category* formatted.

Properties shows you how the *Format* you selected will be displayed and allows you to make changes to that formatting.

29) Under ***Format***, choose ***0.00***.

30) Under ***Properties***, **define** how *Negative, Equal to Zero*, and *Undefined* should be shown.

If the number formatting is set as shown on the previous page, this is what the report would look like.



Department	Department Name	Fund	Fund Name	Expenditure
785	Facilities & Supp	0100	General Fu	11224.61
785	Facilities & Supp	132J	Finance Fe	252.02
785	Facilities & Supp	132K	Finance St	1339.21
785	Facilities & Supp	14DV	Fin-Fm His	Zero
785	Facilities & Supp	3700	Property M	3440.10
785	Facilities & Supp	C08B	Relocate L	Zero
785	Facilities & Supp	C21Q	Capitol Re	Zero
785	Facilities & Supp	C23T	Fire Alarm	Zero
785	Facilities & Supp	C24M	Client Acce	Zero

Alignment of Cells/Tables

Desktop Intelligence offers several options for alignment within a report.

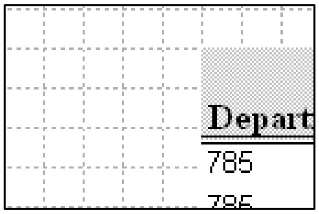
Aligning Cells with the Grid

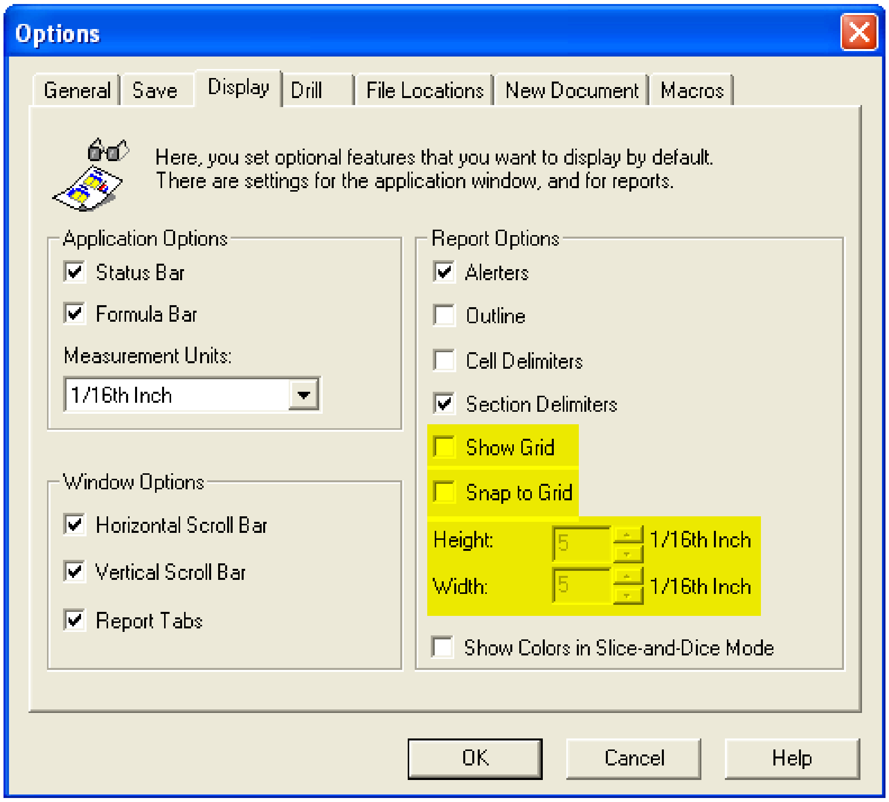
One way to align the edges of several elements on a page is to use the *Grid* option. You may access *Grid* settings by clicking on *Tools* > *Options* on the menu bar and then selecting the *Display* tab.

The *Show Grid* option displays a grid of lines on the background and allows you to determine the distance between the grid lines.

The *Snap to Grid* option forces the upper-left corner of any element you move to a grid line.

Height and *Width* allows you to set the size of the grid.





Here, you set optional features that you want to display by default. There are settings for the application window, and for reports.

Application Options
☑ Status Bar
☑ Formula Bar
Measurement Units: 1/16th Inch

Window Options
☑ Horizontal Scroll Bar
☑ Vertical Scroll Bar
☑ Report Tabs

Report Options
☑ Alerters
☐ Outline
☐ Cell Delimiters
☑ Section Delimiters
☐ Show Grid
☐ Snap to Grid
Height: 5 1/16th Inch
Width: 5 1/16th Inch
☐ Show Colors in Slice-and-Dice Mode

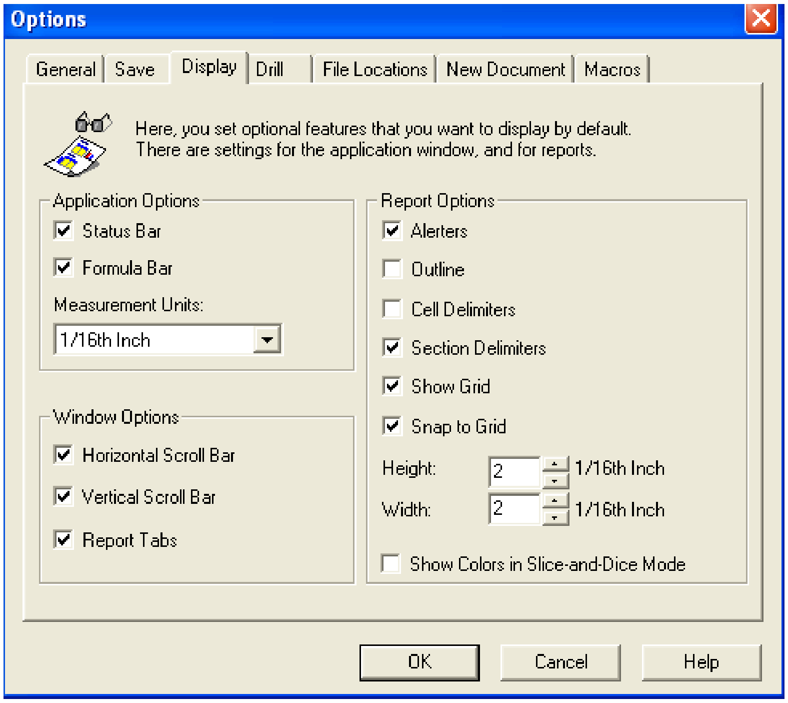
31) Click on ***Tools > Options***.

32) Select the ***Display*** tab.

33) **Check** the ***Show Grid*** and ***Snap to Grid*** options.

34) Change both the ***Height*** and the ***Width*** options to ***2*** to make the lines of the grid **1/16th** of an inch apart.

35) Click ***OK***.



Here, you set optional features that you want to display by default.
There are settings for the application window, and for reports.

Application Options
☑ Status Bar
☑ Formula Bar
Measurement Units: 1/16th Inch

Window Options
☑ Horizontal Scroll Bar
☑ Vertical Scroll Bar
☑ Report Tabs

Report Options
☑ Alerters
☐ Outline
☐ Cell Delimiters
☑ Section Delimiters
☑ Show Grid
☑ Snap to Grid
Height: 2 1/16th Inch
Width: 2 1/16th Inch
☐ Show Colors in Slice-and-Dice Mode

36) **Move** the **table** and the ***Report Title*** around on the page so you can see how the table and the cell snap into place on the grid.

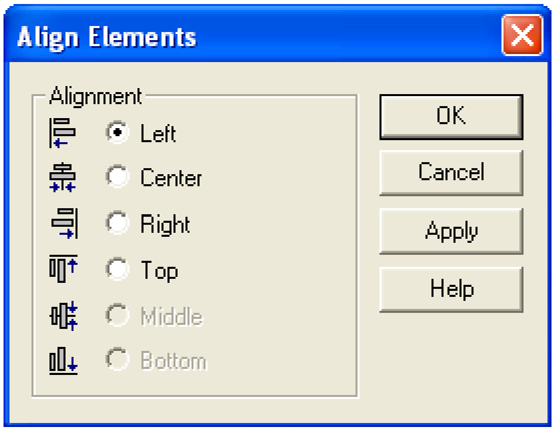
Aligning Cells Using Align Elements

The *Alignment* option also allows you to align the edges of cells. *Align Elements* is found under *Format > Placement > Alignment* on the menu bar.

This option moves the second cell selected in alignment with the first cell selected so that the specified edges align. The order of selecting the cells is very important. The first cell selected becomes the anchor. The second cell selected will be moved to match the location of the first.

37) Insert **two blank cells** on to the report.

38) In the first cell, **type *FIRST***, and in the second cell, **type *SECOND***.



Alignment
● Left
○ Center
○ Right
○ Top
○ Middle
○ Bottom

39) **Move** the cells around so that they are not aligned.

40) **Hold down** the ***CTRL* key** and click on the ***FIRST* cell**.

41) While still **holding down** the ***CTRL* key**, click on the ***SECOND* cell**.

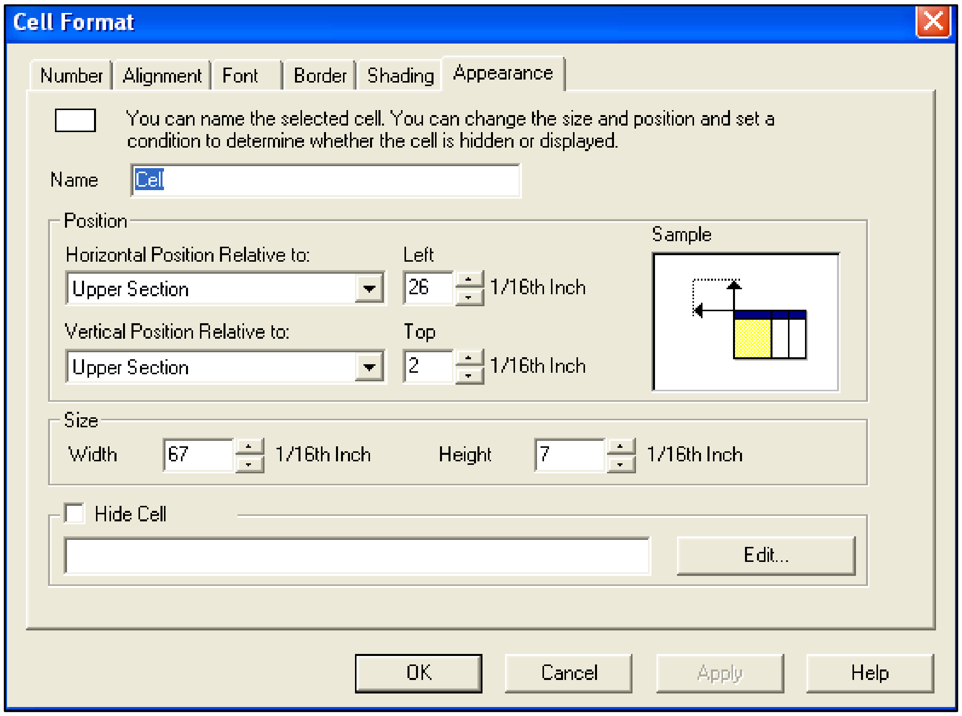
42) Click on the menu bar on ***Format > Placement >Alignment***.

43) Choose an ***Alignment*** (for example, *Left*) and click ***OK***.

The *SECOND* cell should have aligned with the *FIRST* cell.

Aligning Cells/Tables Using Relative Position

Relative Positioning allows you to specify the location of a cell or a table/block relative to another cell or table/block. For example, a text cell may be positioned one half inch below the bottom of a table. If the table changes size after a refresh, the text cell will still be one half inch below the table if *Relative Positioning* is used. This ensures the elements don't overlap.



You can name the selected cell. You can change the size and position and set a condition to determine whether the cell is hidden or displayed.

Name: Cell

Horizontal Position Relative to: Upper Section

Left: 26 1/16th Inch

Vertical Position Relative to: Upper Section

Top: 2 1/16th Inch

Width: 67 1/16th Inch

Height: 7 1/16th Inch

☐ Hide Cell

Note: The reference point for a block for the relative positioning is the lower-right corner of the block. For example, if the position is relative to a table and the settings for *Left* and *Top* are both 0, the location is the lower-right corner of the table.

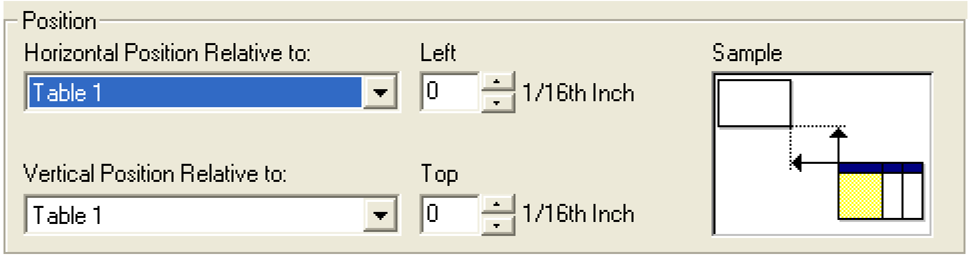
44) **Insert** another **table** onto the report (***Insert > Table***)

45) ***Use existing data from the document*** and select only ***Department*** and ***Fund***.

46) **Right-Click** on the new table and select ***Format Table*.**

47) Click on the ***Appearance*** **tab.**

48) Set the ***Horizontal*** and ***Vertical Position Relative to: Table 1***.



Position

Horizontal Position Relative to: Table 1

Left: 0 1/16th Inch

Vertical Position Relative to: Table 1

Top: 0 1/16th Inch

Notice when you click *OK* that the new table is aligned to the lower-right corner of the original table. By changing the numbers for *Left* and *Top*, the table will be locked in position relative to the position of the element it is set relative to. When that element changes shape or size, the position of the new table will also change.

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Exercise 3: Applying Simple Formatting

Review

1) ***True*** or ***False*** Double-clicking on a cell will resize the cell to the smallest text in the cell.

2) ***True*** or ***False*** If text exceeds a column width, there is no way to fit the content on one line without widening the cell.

3) *Row by Row Auto Fit* will ____

4) What are the four areas available to you on the border tab?

a)

b)

c)

d)

5) On the *Number* tab, *Category* allows ________________________________, *Format* allows ________________________________, and *Properties* allows __________________________.

6) One way to align the edges of several elements on a page is to use the ____________option.

7) Name two other options, other than the option in *Question Six*, that helps with alignment.

a)

b)

8) *Relative Position* allows you to ____.

Hands on Instructions

Task Overview

In this exercise you will take some time to practice the formatting techniques learned in this chapter.

Procedures

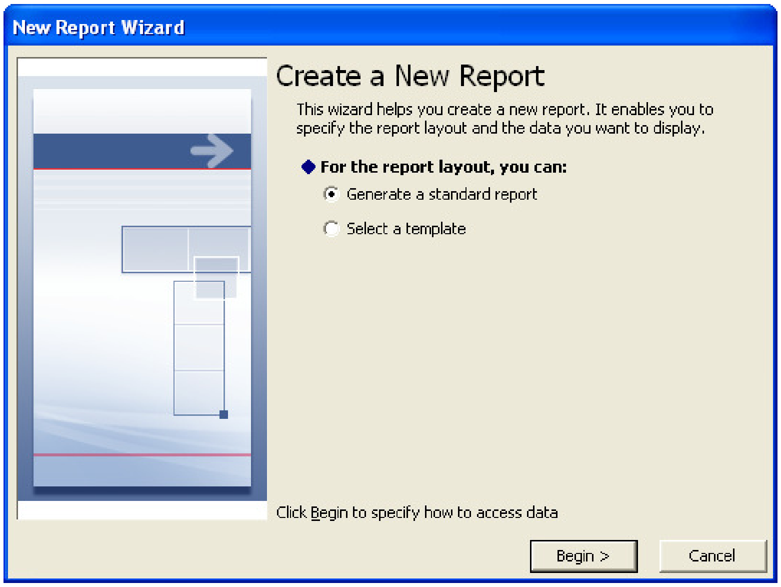
1) Open and log in to **Desktop Intelligence.**
2) Open ***Exercise1_ExpRevRpt—Your Name.***
3) Save your report as ***Exercise3_SimpleFormatting—Your Name.***
4) Use the techniques shown in this chapter to **practice formatting** your report from ***Exercise 1.***
5) For example, **practice** the following:
    a) **Cell Formatting**
        i) Resize columns
        ii) Change column headings
        iii) Wrap text
        iv) Change font
        v) Change shading
        vi) Change borders
        vii) Change number formatting
    b) **Cell/Table Alignment**
        i) Align cells using the grid
        ii) Align cells using *Align Elements*
        iii) Align tables using *Relative Position*

Chapter 7: Crosstab Reports

Crosstabs are a process or function that combines and/or summarizes data from one or more sources into a concise format for analysis or reporting. A **crosstab** is the cross referencing or comparison of two variables (such as amount spent per *Object Code* per *Fiscal Year*) to determine how they are interrelated. A crosstab gets its name from the layout of variable definitions into rows and columns.

Let us walk through building a cross tab report in Desktop Intelligence.

1) In the *New Report Wizard*, *Create a New Report* screen, click on ***Generate a Standard Report.***



Create a New Report

This wizard helps you create a new report. It enables you to specify the report layout and the data you want to display.

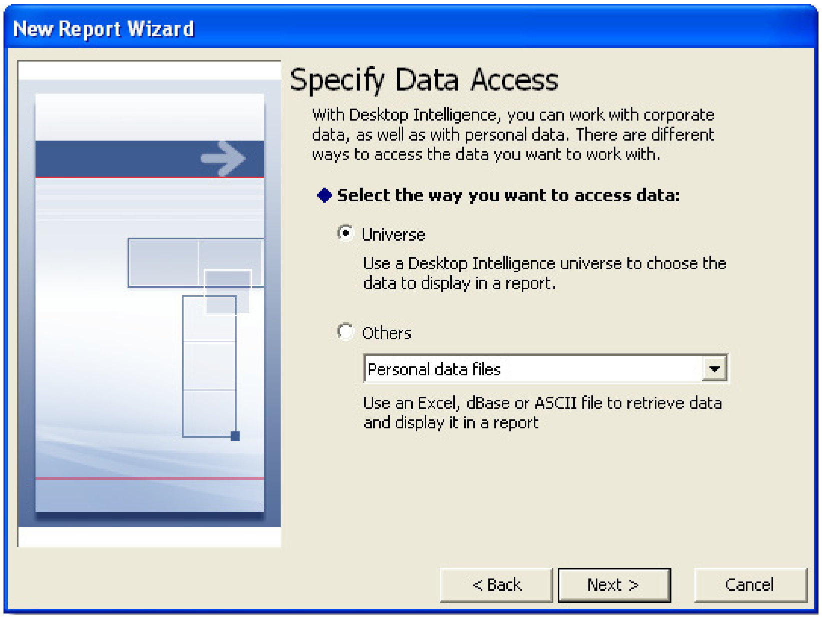
◆ For the report layout, you can:

● Generate a standard report

○ Select a template

Click Begin to specify how to access data

2) On the *Specify Data Access* screen, choose ***Universe*** and click ***Next***.



Specify Data Access

With Desktop Intelligence, you can work with corporate data, as well as with personal data. There are different ways to access the data you want to work with.

◆ Select the way you want to access data:

● Universe

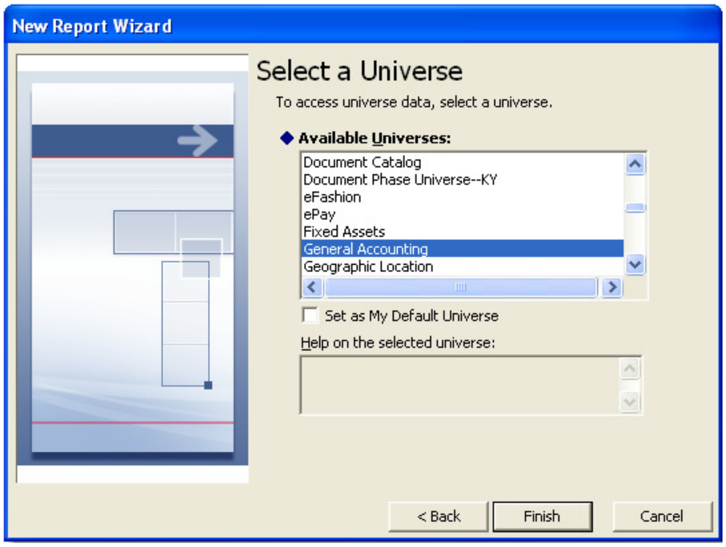
Use a Desktop Intelligence universe to choose the data to display in a report.

○ Others

Personal data files

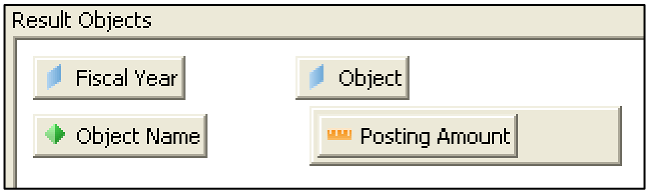
Use an Excel, dBase or ASCII file to retrieve data and display it in a report

3) When the *Select a Universe* screen comes up, select the ***General Accounting Universe*** to build the report from and click on ***Finish***.


New Report Wizard
Select a Universe
To access universe data, select a universe.
Available Universes:
Document Catalog
Document Phase Universe--KY
eFashion
ePay
Fixed Assets
General Accounting
Geographic Location
Set as My Default Universe
Help on the selected universe:
< Back
Finish
Cancel

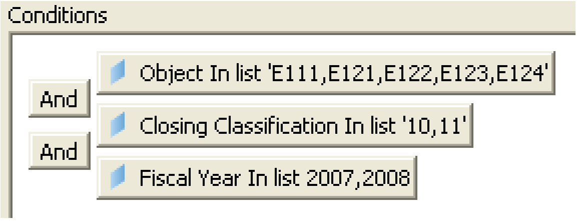
4) Drag the following into the ***Result Objects Panel:***

Accounting Period > ***Fiscal Year***
COA-Fund Accounting > Object >***Object***
COA-Fund Accounting > Object >Object > ***Object Name***
Basic Accounting Ledger > ***Posting Amount***


Result Objects
Fiscal Year
Object
Object Name
Posting Amount

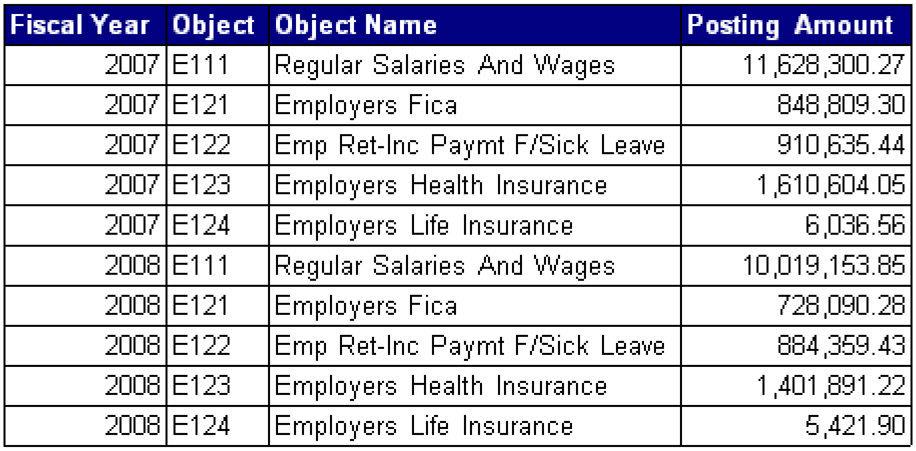
5) The crosstab will show the amount expended for certain *Personnel* costs by *Object* for each *Fiscal Year*. The following ***Conditions*** should be set up to obtain this information:

Object **In list** ‘E111,E121,E122,E123,E124’
AND
Closing Classification **In list** ‘10,11’
(*Cash* and *Accrued Expenditures*)
AND
Fiscal Year **In list** 2007,2008


Conditions
And
And
Object In list 'E111,E121,E122,E123,E124'
Closing Classification In list '10,11'
Fiscal Year In list 2007,2008

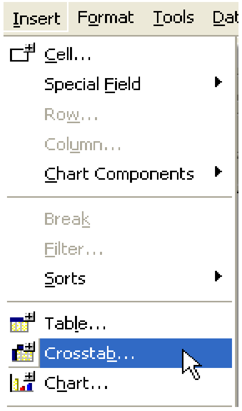
6) ***Run*** the query.

Upon running the query, the initial results will be laid out as depicted below. However, *Posting Amount* results will vary based on when the report is generated.



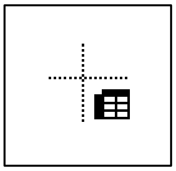
Fiscal Year	Object	Object Name	Posting Amount
2007	E111	Regular Salaries And Wages	11,628,300.27
2007	E121	Employers Fica	848,809.30
2007	E122	Emp Ret-Inc Paymt F/Sick Leave	910,635.44
2007	E123	Employers Health Insurance	1,610,604.05
2007	E124	Employers Life Insurance	6,036.56
2008	E111	Regular Salaries And Wages	10,019,153.85
2008	E121	Employers Fica	728,090.28
2008	E122	Emp Ret-Inc Paymt F/Sick Leave	884,359.43
2008	E123	Employers Health Insurance	1,401,891.22
2008	E124	Employers Life Insurance	5,421.90

The generated report gives us the information we were looking for, while a crosstab report will structure the data so that a side-by-side analysis of expenditures in previous fiscal years and the current fiscal year may be analyzed.



7) In order to create a crosstab report, **delete** the **current table** and click on ***Insert* > *Crosstab*** from the menu bar.

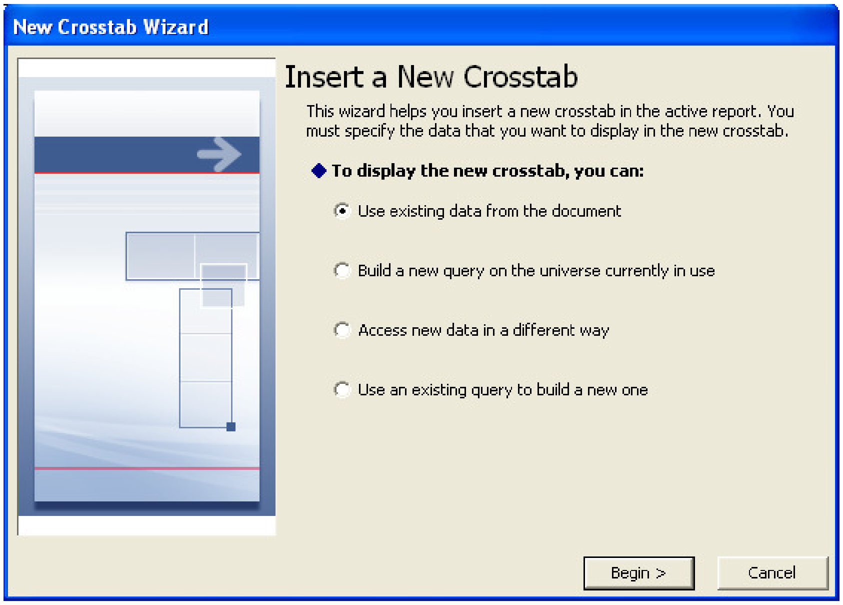
8) When the icon to the right appears, **click somewhere on the blank report.**



The *New Crosstab Wizard* will come up.

To display the new crosstab, you can:

- Use existing data from the document.
- Build a new query on the universe currently in use.
- Access new data in a different way.
- Use an existing query to build a new one.



Insert a New Crosstab

This wizard helps you insert a new crosstab in the active report. You must specify the data that you want to display in the new crosstab.

◆ **To display the new crosstab, you can:**

● Use existing data from the document

○ Build a new query on the universe currently in use

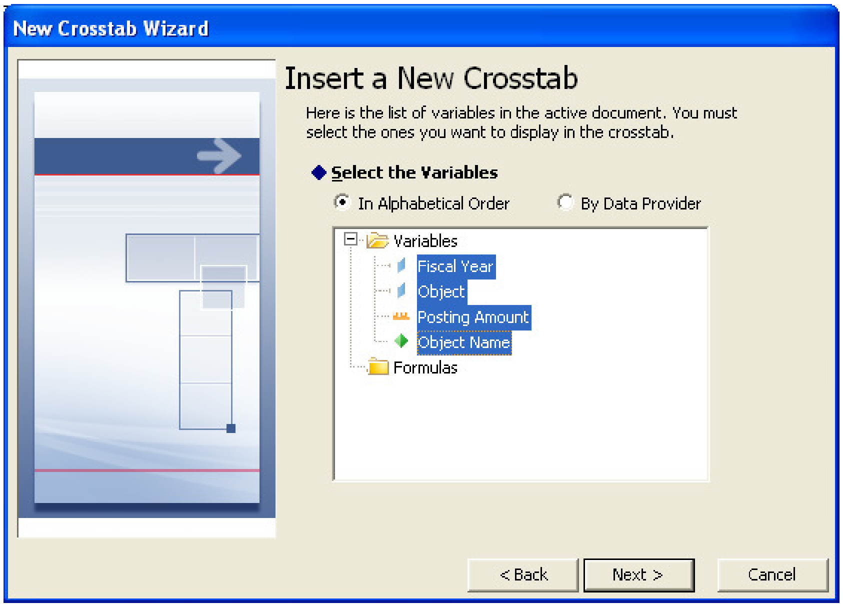
○ Access new data in a different way

○ Use an existing query to build a new one

9) Select ***Use existing data from the document*** and then ***Begin***.

The crosstab will be built using data retrieved by the query that has already been built. The other options are similar to adding a new data provider. The same universe may be used to build a new query, a different universe to build a new query, or the existing query may be copied to build a new query.

10) After selecting *Use existing data from the document* and clicking on *Begin*, the screen below will appear. On this screen, *Variables* to be used in the crosstab report must be selected. In this case, all *Dimension, Detail,* and *Measure Objects* will be used. Select all ***Variables*** and click on ***Next***.



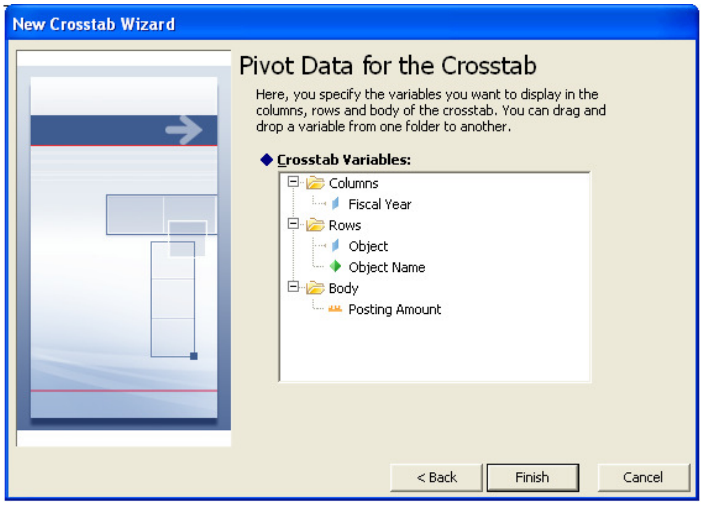
Insert a New Crosstab

Here is the list of variables in the active document. You must select the ones you want to display in the crosstab.

◆ Select the Variables

● In Alphabetical Order ○ By Data Provider

- Variables
  - Fiscal Year
  - Object
  - Posting Amount
  - Object Name
- Formulas



Pivot Data for the Crosstab

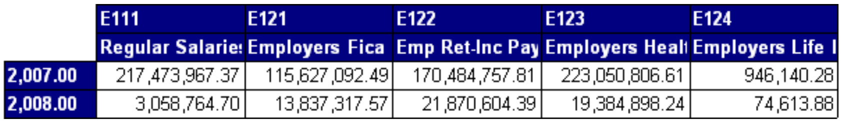
Here, you specify the variables you want to display in the columns, rows and body of the crosstab. You can drag and drop a variable from one folder to another.

◆ Crosstab Variables:

- Columns
  - Fiscal Year
- Rows
  - Object
  - Object Name
- Body
  - Posting Amount

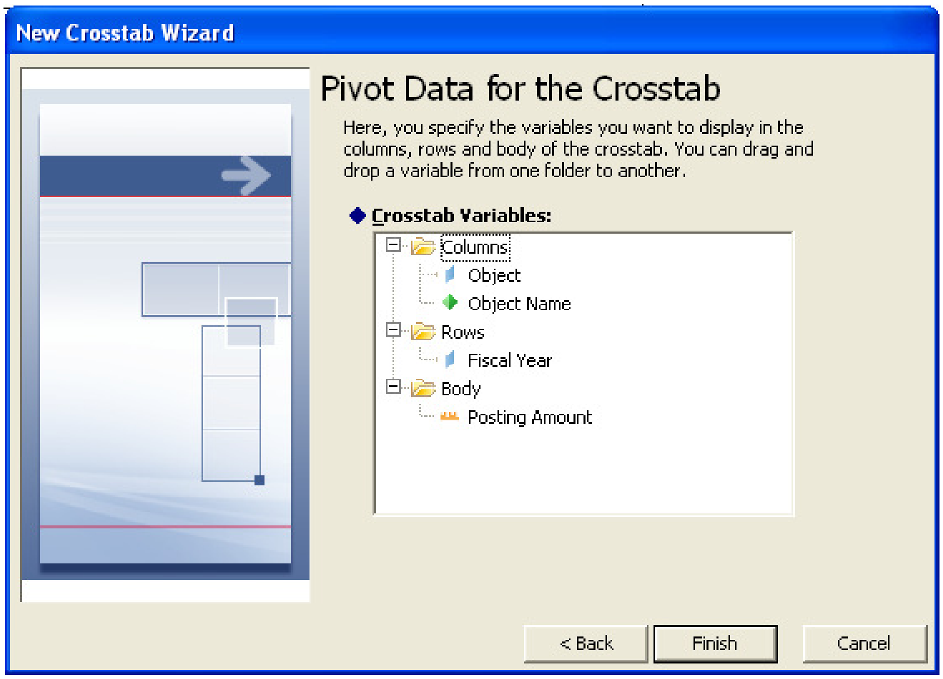
After the selection has been made; you must specify how you want to display the information in the crosstab.

If we leave everything as it is set up in the screen shot above, this is how our data will appear.



	E111	E121	E122	E123	E124
	Regular Salarie	Employers Fica	Emp Ret-Inc Pay	Employers Heal	Employers Life I
2,007.00	217,473,967.37	115,627,092.49	170,484,757.81	223,050,806.61	946,140.28
2,008.00	3,058,764.70	13,837,317.57	21,870,604.39	19,384,898.24	74,613.88

11) However, we may **change the layout of the crosstab by rearranging the data** to appear differently on the *Pivot Data for the Crosstab* screen.



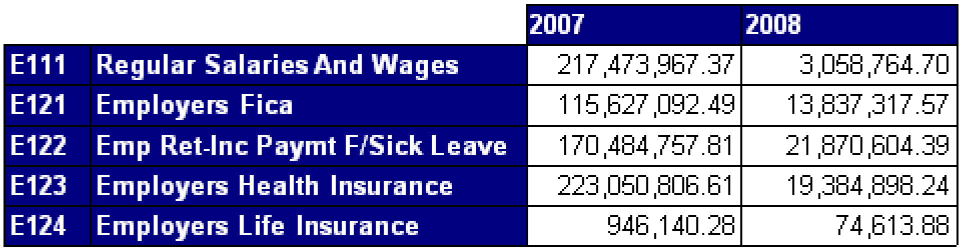
Pivot Data for the Crosstab

Here, you specify the variables you want to display in the columns, rows and body of the crosstab. You can drag and drop a variable from one folder to another.

◆ Crosstab Variables:

- Columns
  - Object
  - Object Name
- Rows
  - Fiscal Year
- Body
  - Posting Amount

By changing the layout of the crosstab, as shown in the above screen shot, the crosstab rearranges the data as shown below:

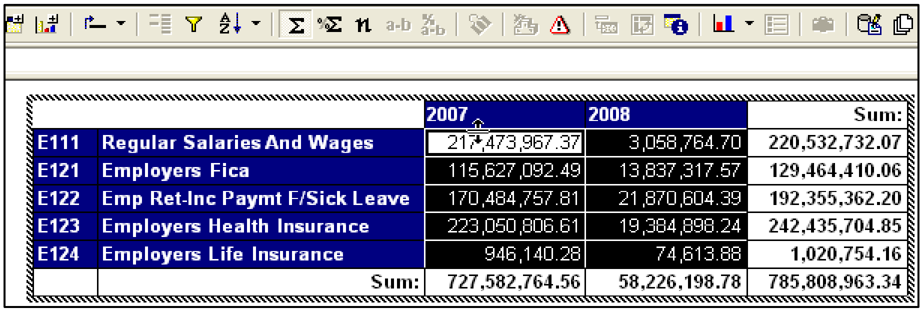


		2007	2008
E111	Regular Salaries And Wages	217,473,967.37	3,058,764.70
E121	Employers Fica	115,627,092.49	13,837,317.57
E122	Emp Ret-Inc Paymt F/Sick Leave	170,484,757.81	21,870,604.39
E123	Employers Health Insurance	223,050,806.61	19,384,898.24
E124	Employers Life Insurance	946,140.28	74,613.88

NOTE: The *Fiscal Year* was formatted to remove the decimals, which is the default formatting for numbers. Refer to the formatting chapter for more information.

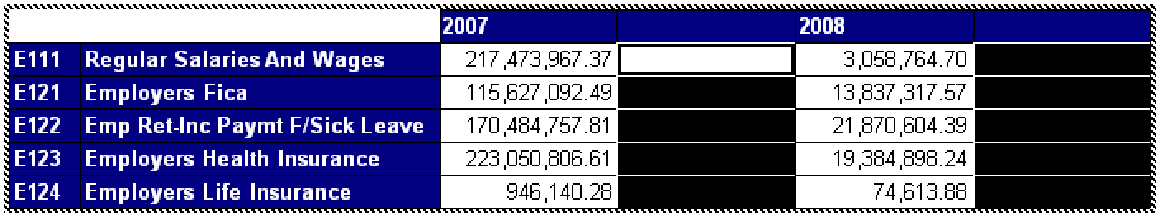
At this point you have a functioning crosstab report that analyzes expenditures for various personnel costs over multiple fiscal years. If you want to total the expenditures to get a grand total for each fiscal year and a grand total for each object, you would simply insert a sum.

12) To insert a sum, click on the **data** under one of the **fiscal year columns** and then click on the **sigma symbol** Σ (sum icon) on the toolbar.



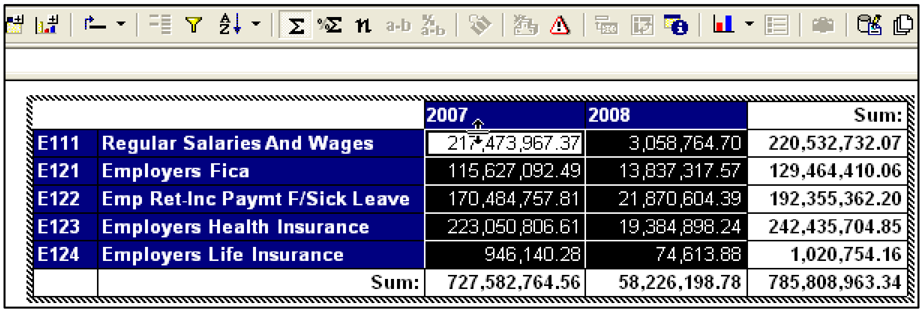
		2007	2008	Sum:
E111	Regular Salaries And Wages	217,473,967.37	3,058,764.70	220,532,732.07
E121	Employers Fica	115,627,092.49	13,837,317.57	129,464,410.06
E122	Emp Ret-Inc Paymt F/Sick Leave	170,484,757.81	21,870,604.39	192,355,362.20
E123	Employers Health Insurance	223,050,806.61	19,384,898.24	242,435,704.85
E124	Employers Life Insurance	946,140.28	74,613.88	1,020,754.16
	Sum:	727,582,764.56	58,226,198.78	785,808,963.34

However, what if a total was not beneficial? How could one see the difference expended in each fiscal year? If the total is removed, you can try to insert a column in order to add a variable that would show you the difference. But if a column is inserted, the report ends up looking like the screen shot below. An additional column is placed beside each value shown for fiscal year.



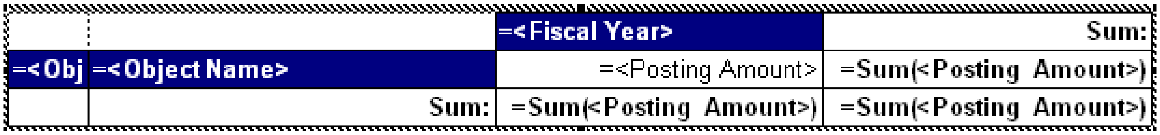
		2007		2008	
E111	Regular Salaries And Wages	217,473,967.37		3,058,764.70	
E121	Employers Fica	115,627,092.49		13,837,317.57	
E122	Emp Ret-Inc Paymt F/Sick Leave	170,484,757.81		21,870,604.39	
E123	Employers Health Insurance	223,050,806.61		19,384,898.24	
E124	Employers Life Insurance	946,140.28		74,613.88	

13) In order to show the difference between the fiscal years, a **total must be inserted** as shown in ***Step 11*** on the previous page.



		2007	2008	Sum:
E111	Regular Salaries And Wages	217,473,967.37	3,058,764.70	220,532,732.07
E121	Employers Fica	115,627,092.49	13,837,317.57	129,464,410.06
E122	Emp Ret-Inc Paymt F/Sick Leave	170,484,757.81	21,870,604.39	192,355,362.20
E123	Employers Health Insurance	223,050,806.61	19,384,898.24	242,435,704.85
E124	Employers Life Insurance	946,140.28	74,613.88	1,020,754.16
	Sum:	727,582,764.56	58,226,198.78	785,808,963.34

Next, three variables must be created. Two variables are needed to obtain the amounts for each fiscal year. This is because of the way the crosstab is structured. If you look at the *Structure View* of the crosstab, you will see that *Posting Amount* is broken out based on *Fiscal Year* but there is no definite way to show that without a variable.



		=<Fiscal Year>	Sum:
=<Obj	=<Object Name>	=<Posting Amount>	=Sum(<Posting Amount>)
	Sum:	=Sum(<Posting Amount>)	=Sum(<Posting Amount>)

14) Create two variables: ***FY2007*** and ***FY2008***.

FY2007: =if <Fiscal Year>=2007 then <Posting Amount> else 0.00

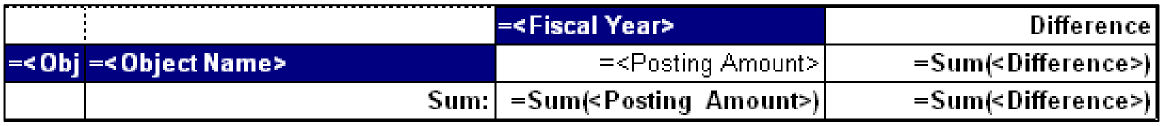
FY2008: =if <Fiscal Year>=2008 then <Posting Amount> else 0.00

15) Now create a **variable to calculate the difference** between the two fiscal years.

Difference: =<FY2008>-<FY2007>

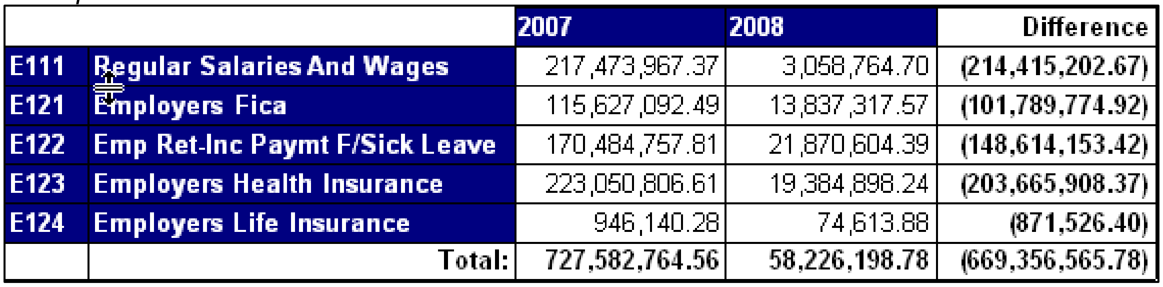
16) Once all variables have been created, the formula in the *Sum:* column, ***=Sum(<Posting Amount>)***, may be replaced with the variable ***Difference***. Be sure to include the function ***Sum()*** around the variable ***Difference*** or you will receive an error.

In Structure View:



		=<Fiscal Year>	Difference
=<Obj	=<Object Name>	=<Posting Amount>	=Sum(<Difference>)
	Sum:	=Sum(<Posting Amount>)	=Sum(<Difference>)

In Report View:



		2007	2008	Difference
E111	Regular Salaries And Wages	217,473,967.37	3,058,764.70	(214,415,202.67)
E121	Employers Fica	115,627,092.49	13,837,317.57	(101,789,774.92)
E122	Emp Ret-Inc Paymt F/Sick Leave	170,484,757.81	21,870,604.39	(148,614,153.42)
E123	Employers Health Insurance	223,050,806.61	19,384,898.24	(203,665,908.37)
E124	Employers Life Insurance	946,140.28	74,613.88	(871,526.40)
	Total:	727,582,764.56	58,226,198.78	(669,356,565.78)

There are many ways crosstab reports may be beneficial. The key is to practice using them for analysis of daily, monthly, quarterly or yearly activity.

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Exercise 4: Building a Crosstab Report

Review

1) Crosstabs are a ___________________ or ___________________ that ___________________

and/or ___________________ data from one or more sources into a _______________________

____.

2) A crosstab is the ____.

3) In the *New Crosstab Wizard*, what are the four options for displaying a new crosstab?.

a)

b)

c)

d)

4) In order to show the *Difference* of two columns in a crosstab, what steps must be taken?

Hands on Instructions

Task Overview

Create a new report created to practice using *Crosstabs* in a report.

For this exercise, you will create a report that will use a crosstab to compare *Personnel Costs* by *Fund Type* and *Fund* for *Department 785* for *Fiscal Year 2007.*

Procedures

1) Open and log into **Desktop Intelligence**.
2) When the *New Report Wizard* comes up, click ***Generate a Standard Report***.
3) Click on "***Begin >***".
4) Click ***Universe*** for *Select the way you want to access data.*
5) Click "***Next >***".
6) Select ***General Accounting Universe***.
7) Click on "***Finish***".
8) Drag the following objects into the ***Result Objects Panel***:

Fiscal Year

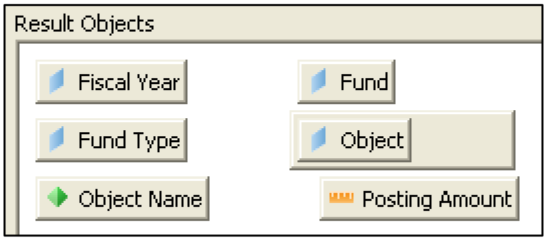
Fund

Fund Type

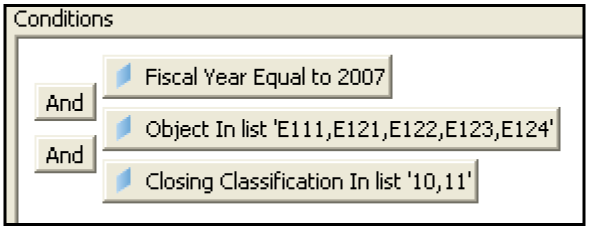
Object

Object Name

Posting Amount (Basic Accounting Journal)


Result Objects
Fiscal Year
Fund
Fund Type
Object
Object Name
Posting Amount

9) Create the following ***Conditions***:


Conditions
And
And

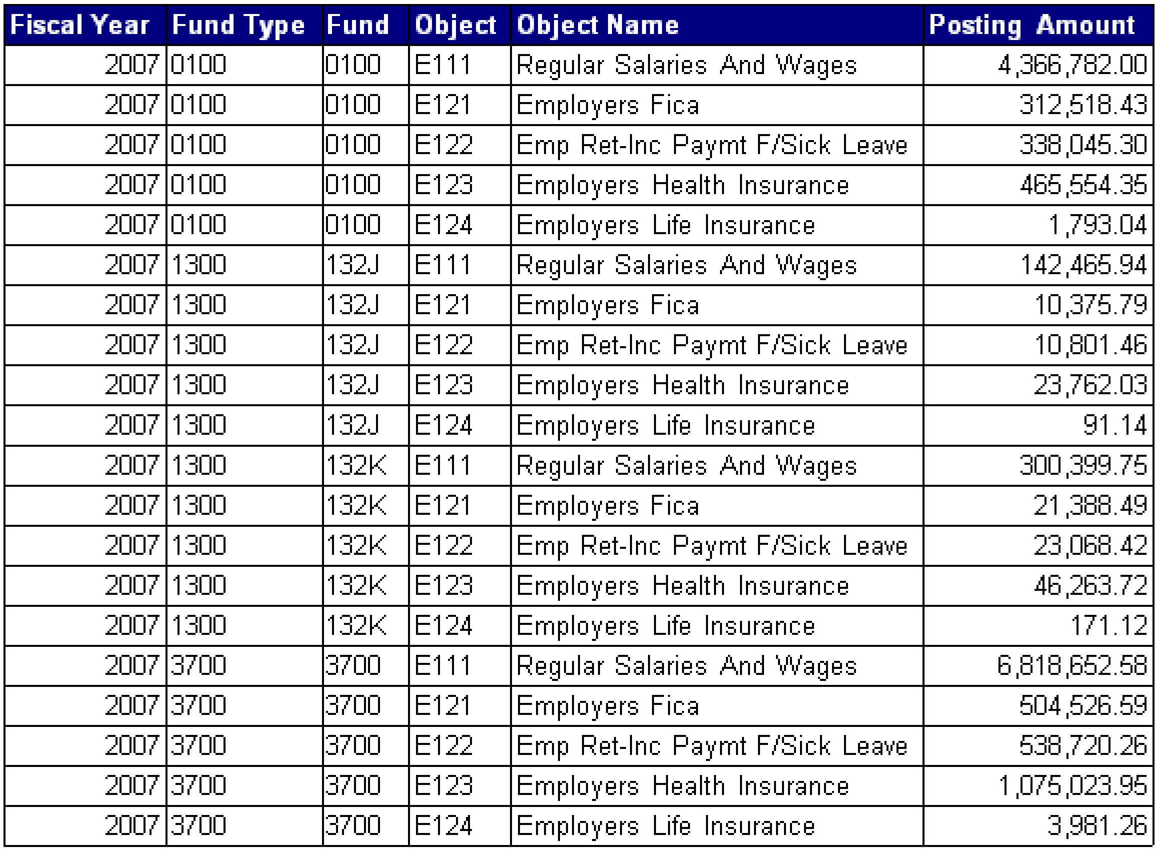
Fiscal Year Equal to 2007

Object In list 'E111,E121,E122,E123,E124'

Closing Classification In list '10,11'

10) ***Run*** the Query.

You should return results similar to these.



Fiscal Year	Fund Type	Fund	Object	Object Name	Posting Amount
2007	0100	0100	E111	Regular Salaries And Wages	4,366,782.00
2007	0100	0100	E121	Employers Fica	312,518.43
2007	0100	0100	E122	Emp Ret-Inc Paymt F/Sick Leave	338,045.30
2007	0100	0100	E123	Employers Health Insurance	465,554.35
2007	0100	0100	E124	Employers Life Insurance	1,793.04
2007	1300	132J	E111	Regular Salaries And Wages	142,465.94
2007	1300	132J	E121	Employers Fica	10,375.79
2007	1300	132J	E122	Emp Ret-Inc Paymt F/Sick Leave	10,801.46
2007	1300	132J	E123	Employers Health Insurance	23,762.03
2007	1300	132J	E124	Employers Life Insurance	91.14
2007	1300	132K	E111	Regular Salaries And Wages	300,399.75
2007	1300	132K	E121	Employers Fica	21,388.49
2007	1300	132K	E122	Emp Ret-Inc Paymt F/Sick Leave	23,068.42
2007	1300	132K	E123	Employers Health Insurance	46,263.72
2007	1300	132K	E124	Employers Life Insurance	171.12
2007	3700	3700	E111	Regular Salaries And Wages	6,818,652.58
2007	3700	3700	E121	Employers Fica	504,526.59
2007	3700	3700	E122	Emp Ret-Inc Paymt F/Sick Leave	538,720.26
2007	3700	3700	E123	Employers Health Insurance	1,075,023.95
2007	3700	3700	E124	Employers Life Insurance	3,981.26

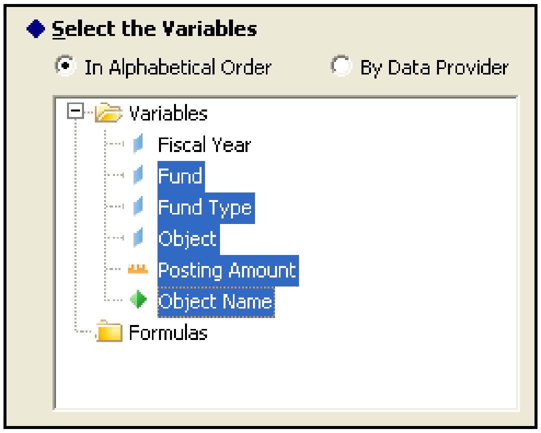
11) ***Save*** your report as ***Exercise4_Crosstabs—Your Name.***

12) To create a crosstab, **delete the table** from the report.

13) From the menu bar, select ***Insert > Crosstab*** and click **somewhere inside the *Report Panel*.**

14) Click on ***Use existing data from the document*** when the *New Crosstab Wizard* appears.

15) Select ***Fund***, ***Fund Type***, ***Object***, ***Posting Amount*** *and* ***Object Name*** from the list of variables available to use in the crosstab and then click on ***Next***.



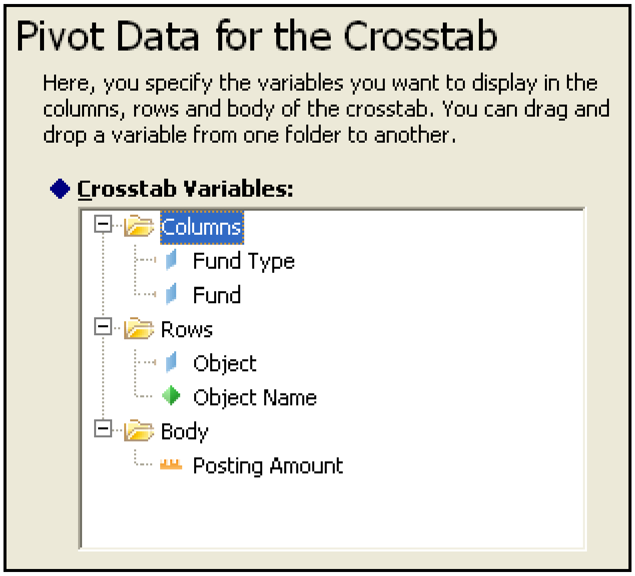
Select the Variables

● In Alphabetical Order ○ By Data Provider

Variables
- Fiscal Year
- Fund
- Fund Type
- Object
- Posting Amount
- Object Name

Formulas

16) How you wish to see the data laid out in the crosstab will determine how you decide to *Pivot Data for the Crosstab*. For this example, move objects to ***Columns*** or ***Rows*** as shown below and click on ***Finish***.



Pivot Data for the Crosstab

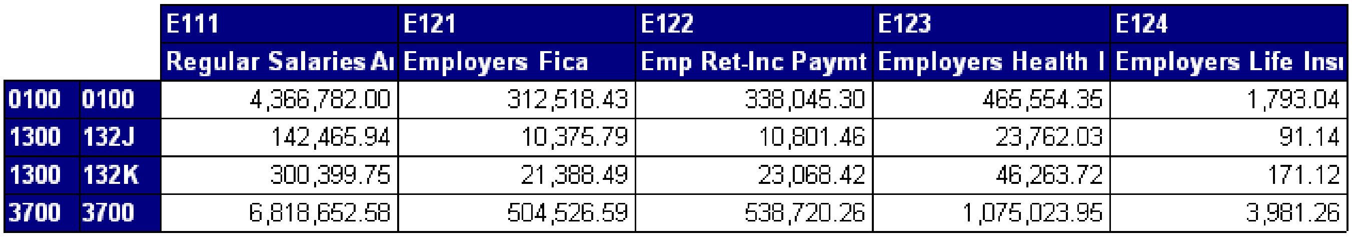
Here, you specify the variables you want to display in the columns, rows and body of the crosstab. You can drag and drop a variable from one folder to another.

◆ **Crosstab Variables:**

- Columns
  - Fund Type
  - Fund
- Rows
  - Object
  - Object Name
- Body
  - Posting Amount

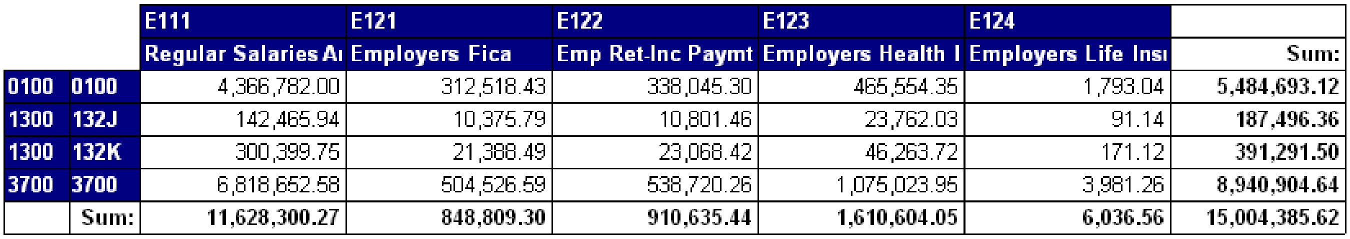
Once you have completed the exercise if you have time, go back and set up the crosstab with *Object* and *Object Name* under *Columns* and *Fund Type* and *Fund* under *Rows* to analyze the difference that small change makes to the crosstab report.

Your results should be similar to these:



		E111	E121	E122	E123	E124
		Regular Salaries A	Employers Fica	Emp Ret-Inc Paymt	Employers Health I	Employers Life Ins
0100	0100	4,366,782.00	312,518.43	338,045.30	465,554.35	1,793.04
1300	132J	142,465.94	10,375.79	10,801.46	23,762.03	91.14
1300	132K	300,399.75	21,388.49	23,068.42	46,263.72	171.12
3700	3700	6,818,652.58	504,526.59	538,720.26	1,075,023.95	3,981.26

17) Insert a ***Sum*** to total up the **expenditures**.

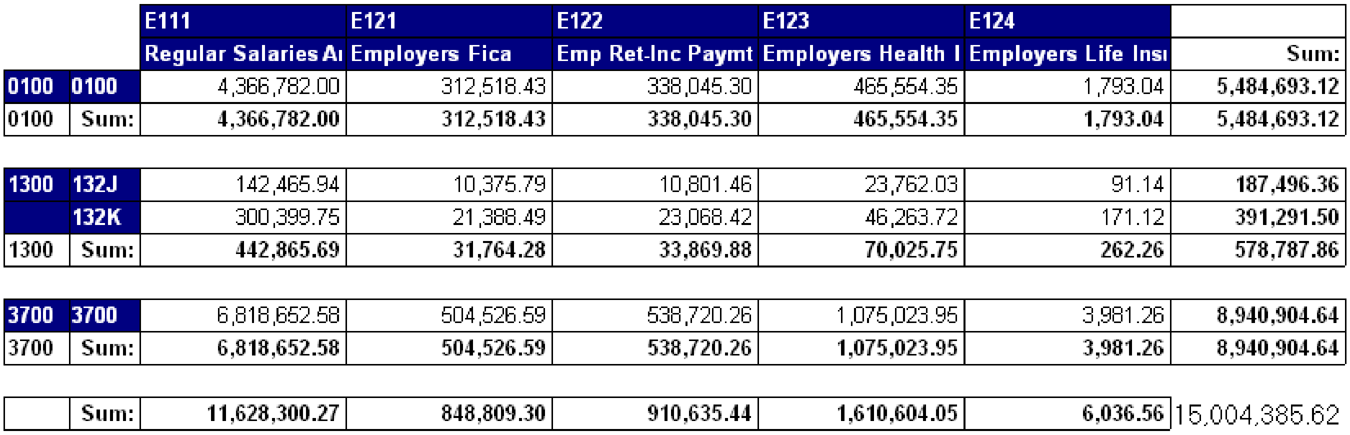


		E111	E121	E122	E123	E124	
		Regular Salaries A	Employers Fica	Emp Ret-Inc Paymt	Employers Health I	Employers Life Ins	Sum:
0100	0100	4,366,782.00	312,518.43	338,045.30	465,554.35	1,793.04	**5,484,693.12**
1300	132J	142,465.94	10,375.79	10,801.46	23,762.03	91.14	**187,496.36**
1300	132K	300,399.75	21,388.49	23,068.42	46,263.72	171.12	**391,291.50**
3700	3700	6,818,652.58	504,526.59	538,720.26	1,075,023.95	3,981.26	**8,940,904.64**
	Sum:	**11,628,300.27**	**848,809.30**	**910,635.44**	**1,610,604.05**	**6,036.56**	**15,004,385.62**

At this point, you have created a functioning crosstab report. However, there are several things you may do to break the report down even further or format the report differently.

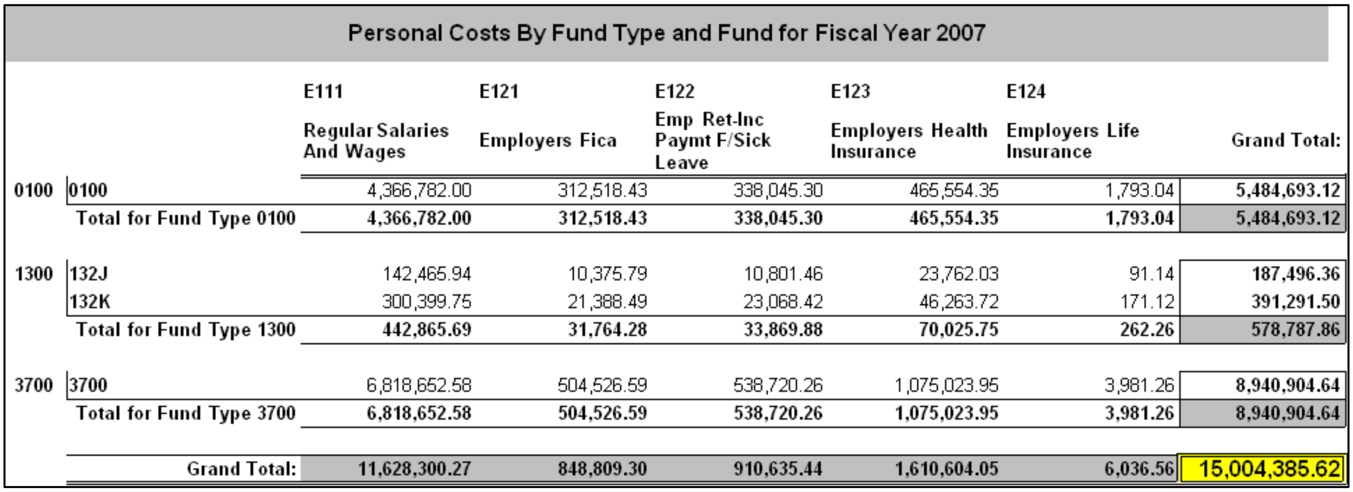
18) Insert a ***Break*** on ***Fund Type*** by clicking in the ***Fund Type* column** and then clicking on ***Insert Break***. *Breaks* will be covered in the following chapter.

19) Remove the ***Sum*** you inserted and re-insert the ***Sum*** so that you can get totals for the ***Fund Type*** breakdown.



		E111 Regular Salaries A	E121 Employers Fica	E122 Emp Ret-Inc Paymt	E123 Employers Health I	E124 Employers Life Ins	Sum:
0100	0100	4,366,782.00	312,518.43	338,045.30	465,554.35	1,793.04	5,484,693.12
0100	Sum:	4,366,782.00	312,518.43	338,045.30	465,554.35	1,793.04	5,484,693.12
1300	132J	142,465.94	10,375.79	10,801.46	23,762.03	91.14	187,496.36
	132K	300,399.75	21,388.49	23,068.42	46,263.72	171.12	391,291.50
1300	Sum:	442,865.69	31,764.28	33,869.88	70,025.75	262.26	578,787.86
3700	3700	6,818,652.58	504,526.59	538,720.26	1,075,023.95	3,981.26	8,940,904.64
3700	Sum:	6,818,652.58	504,526.59	538,720.26	1,075,023.95	3,981.26	8,940,904.64
	Sum:	11,628,300.27	848,809.30	910,635.44	1,610,604.05	6,036.56	15,004,385.62

20) Apply the **formatting skills** and, using what you have learned about formulas and variables, **experiment** with this crosstab report by making it more appealing. The image below is an example of what a finalized report using a crosstab would look like.



Personal Costs By Fund Type and Fund for Fiscal Year 2007

		E111 Regular Salaries And Wages	E121 Employers Fica	E122 Emp Ret-Inc Paymt F/Sick Leave	E123 Employers Health Insurance	E124 Employers Life Insurance	Grand Total:
0100	0100	4,366,782.00	312,518.43	338,045.30	465,554.35	1,793.04	5,484,693.12
	Total for Fund Type 0100	4,366,782.00	312,518.43	338,045.30	465,554.35	1,793.04	5,484,693.12
1300	132J	142,465.94	10,375.79	10,801.46	23,762.03	91.14	187,496.36
	132K	300,399.75	21,388.49	23,068.42	46,263.72	171.12	391,291.50
	Total for Fund Type 1300	442,865.69	31,764.28	33,869.88	70,025.75	262.26	578,787.86
3700	3700	6,818,652.58	504,526.59	538,720.26	1,075,023.95	3,981.26	8,940,904.64
	Total for Fund Type 3700	6,818,652.58	504,526.59	538,720.26	1,075,023.95	3,981.26	8,940,904.64
	Grand Total:	11,628,300.27	848,809.30	910,635.44	1,610,604.05	6,036.56	15,004,385.62

21) ***Save*** your report.

22) ***Close*** your report.

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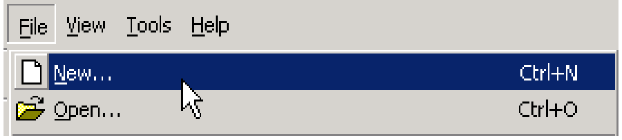
Chapter 8: Sections

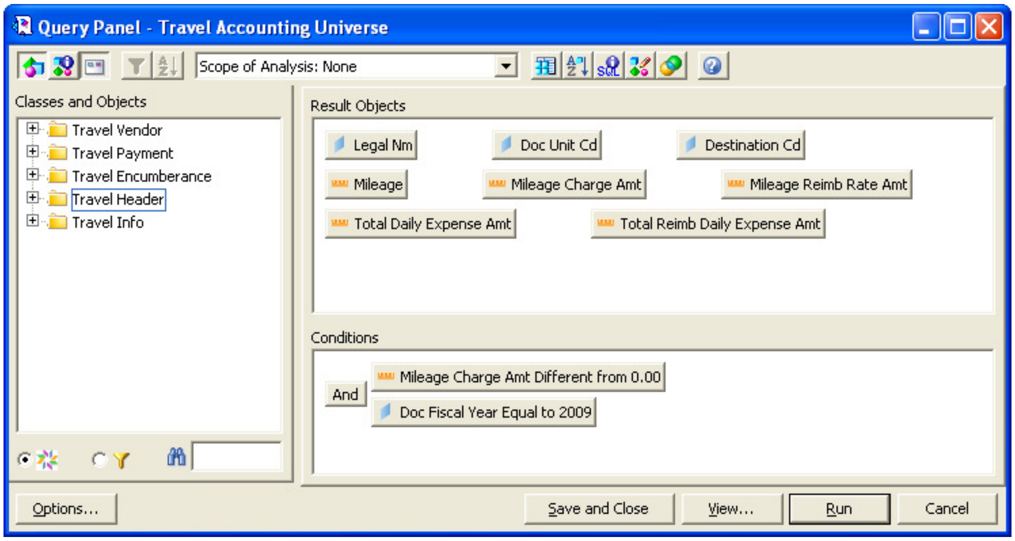
How to Create Sections

Adding sections to group data helps to add organization to reports. To make reports easy to navigate, you may divide the report into sections that group related data together. The tables in a section only display the data relevant to the *Dimension Object* on which the section is created. For example, sections created based on *Fund* will separate the data into different groups for each *Fund* listed in the report.

To demonstrate sectioning, we will build a simple *Travel* mileage report.


File
View
Tools
Help
New...
Ctrl+N
Open...
Ctrl+O

1. Click on ***File > New***.
2. When the *New Report Wizard* comes up, select the ***Travel Accounting*** universe.
3. Select the following ***Dimension Objects*** and ***Measures*** from the specified ***Class***:


Query Panel - Travel Accounting Universe
Scope of Analysis: None
Classes and Objects
Travel Vendor
Travel Payment
Travel Encumberance
Travel Header
Travel Info
Result Objects
Legal Nm
Doc Unit Cd
Destination Cd
Mileage
Mileage Charge Amt
Mileage Reimb Rate Amt
Total Daily Expense Amt
Total Reimb Daily Expense Amt
Conditions
And
Mileage Charge Amt Different from 0.00
Doc Fiscal Year Equal to 2009
Options...
Save and Close
View...
Run
Cancel

***Travel Vendor*:**

Legal Nm

***Travel Payment*::**

Doc Unit Cd

Destination Cd

Mileage

Mileage Charge Amt

Mileage Reimb Rate Amt

Total Daily Expense Amt

Total Reimb Daily Expense Amt

4. Add the following filters to the ***Conditions*** panel:

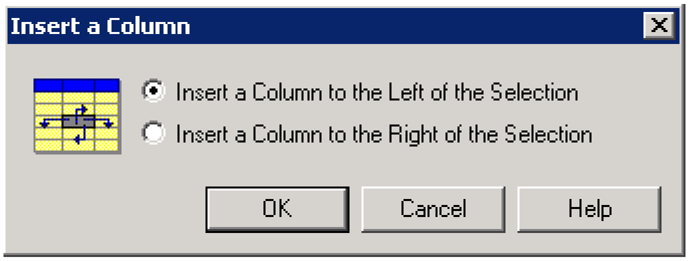
   Travel Payment > Mileage Charge Amt Different from 0.00

   Travel Header > Doc Fiscal Year Equal to 2009

5. Run the report.

The report will show all mileage and reimbursement amounts for your Department for Fiscal Year 2009. Since ***Mileage Charge Amt*** is only a portion of the total reimbursement amount for a voucher, we will add a column for ***Other Charges***.

6. Select the ***Total Daily Expense Amt*** column and click ***Insert > Column***. When prompted, indicate that you would like a column inserted to the left of the selection.

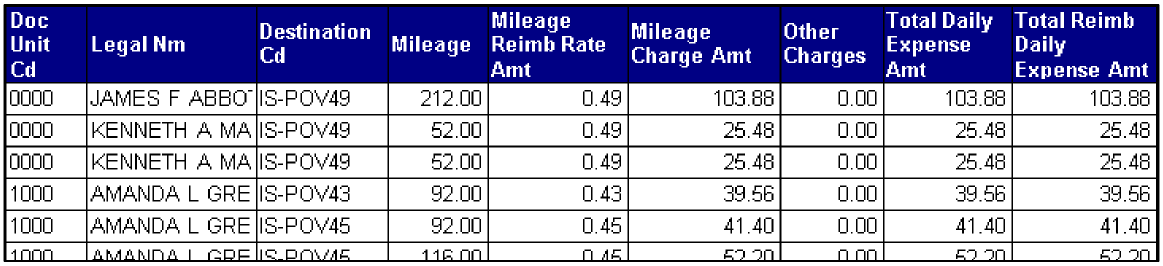

Insert a Column

● Insert a Column to the Left of the Selection
○ Insert a Column to the Right of the Selection

7. Name the new column ***Other Charges***.
8. Set the contents of the column by typing the following formula into the cell:

   = <Total Daily Expense Amt>-<Mileage Charge Amt>

9. Rearrange the columns so that they appear as shown below.



Doc Unit Cd	Legal Nm	Destination Cd	Mileage	Mileage Reimb Rate Amt	Mileage Charge Amt	Other Charges	Total Daily Expense Amt	Total Reimb Daily Expense Amt
0000	JAMES F ABBO	IS-POV49	212.00	0.49	103.88	0.00	103.88	103.88
0000	KENNETH A MA	IS-POV49	52.00	0.49	25.48	0.00	25.48	25.48
0000	KENNETH A MA	IS-POV49	52.00	0.49	25.48	0.00	25.48	25.48
1000	AMANDA L GRE	IS-POV43	92.00	0.43	39.56	0.00	39.56	39.56
1000	AMANDA L GRE	IS-POV45	92.00	0.45	41.40	0.00	41.40	41.40
1000	AMANDA L GRE	IS-POV45	116.00	0.45	52.20	0.00	52.20	52.20

Notice that the ***Mileage Reimb Rate Amt*** does not appear correctly because it usually is less than $1.00, and there are rate amounts greater than that. This is because the data for multiple days on the voucher has been aggregated. In order to fix this, we must either turn off that aggregation or add a field to our report to indicate the different days when charges were incurred. We will do both.

10. Turn off row aggregation by right-clicking on the table and selecting *Format Table*. On the *General* tab, select ***Avoid Duplicate Rows Aggregation***.

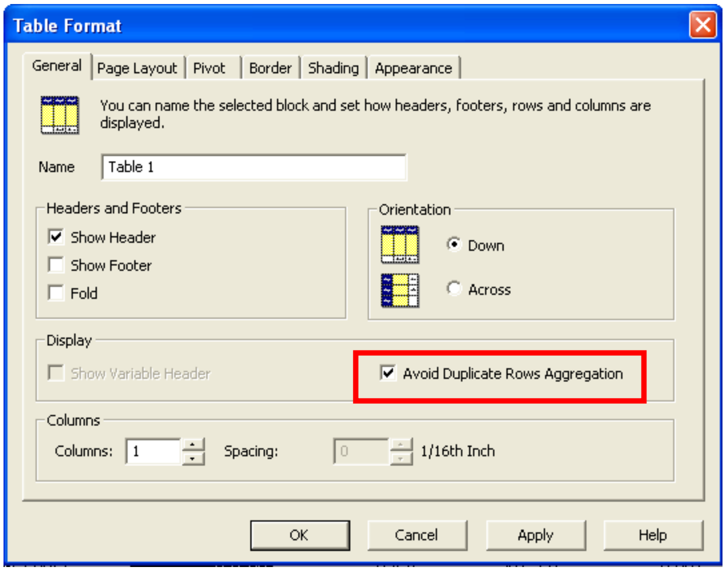


Table Format

You can name the selected block and set how headers, footers, rows and columns are displayed.

Name: Table 1

Headers and Footers
☑ Show Header
☐ Show Footer
☐ Fold

Orientation
● Down
○ Across

Display
☐ Show Variable Header
☑ Avoid Duplicate Rows Aggregation

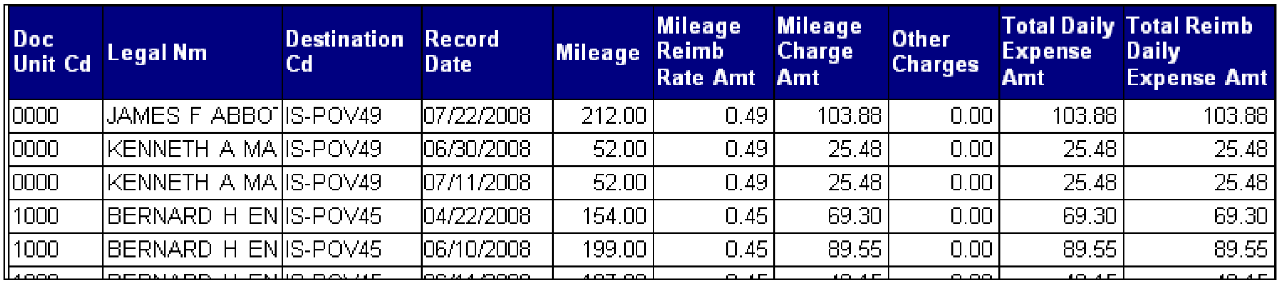
Columns
Columns: 1
Spacing: 0 1/16th Inch

Notice that the ***Mileage Reimb Rate Amt*** now appears correctly, but the report contains rows with duplicated data.

11. Next, add the following field to your query and report:

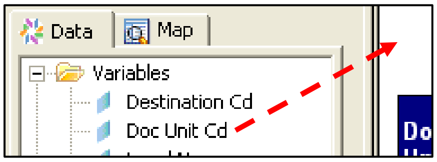
    Travel Payment > Record Date

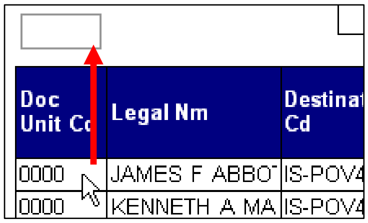
12. Rearrange columns again if necessary so that your report appears as shown below.



Doc Unit Cd	Legal Nm	Destination Cd	Record Date	Mileage	Mileage Reimb Rate Amt	Mileage Charge Amt	Other Charges	Total Daily Expense Amt	Total Reimb Daily Expense Amt
0000	JAMES F ABBO	IS-POV49	07/22/2008	212.00	0.49	103.88	0.00	103.88	103.88
0000	KENNETH A MA	IS-POV49	06/30/2008	52.00	0.49	25.48	0.00	25.48	25.48
0000	KENNETH A MA	IS-POV49	07/11/2008	52.00	0.49	25.48	0.00	25.48	25.48
1000	BERNARD H EN	IS-POV45	04/22/2008	154.00	0.45	69.30	0.00	69.30	69.30
1000	BERNARD H EN	IS-POV45	06/10/2008	199.00	0.45	89.55	0.00	89.55	89.55

We are now ready to create a section in this report on ***Doc Unit Cd***. To create a section, there are two methods that we may use. One method would be to drag the object from the *Report Manager* onto the report into a section. This will not remove ***Doc Unit Cd*** from the table.

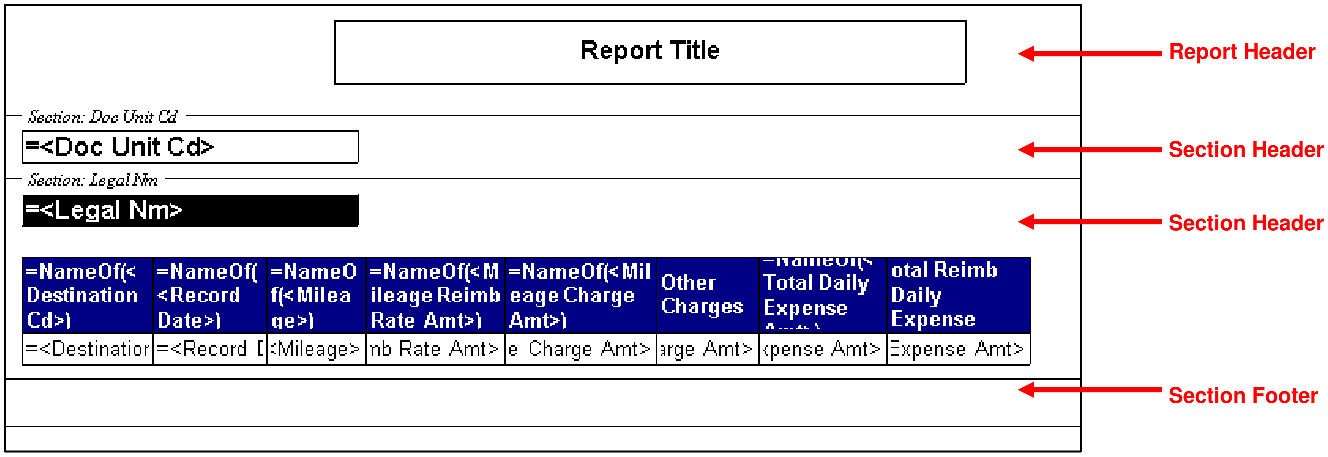

Data
Map
Variables
Destination Cd
Doc Unit Cd
Do


Doc Unit Cd
Legal Nm
Destinat Cd
0000
JAMES F ABBO
IS-POV4
0000
KENNETH A MA
IS-POV4

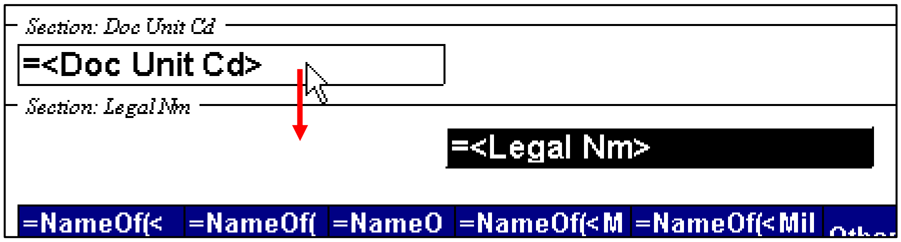
The other method is to drag the object from the table to a section. In the example to the left, we drag the object from the table directly above it. This will remove ***Doc Unit Cd*** from the table and create a section on it.

13. Create a ***Section*** on ***Doc Unit Cd***, and another on ***Legal Nm***.

In ***Structure View***, you will see that there are now two sections on the report: one for each object on which we created a section. The report may be left as is, but if it is large, each section will take up unneeded space. We need to move all ***Master Cells*** together.


Report Title
Report Header
Section: Doc Unit Cd
=<Doc Unit Cd>
Section Header
Section: Legal Nm
=<Legal Nm>
Section Header
=NameOf(<Destination Cd>)
=NameOf(<Record Date>)
=NameOf(<Mileage>)
=NameOf(<Mileage Reimb Rate Amt>)
=NameOf(<Mileage Charge Amt>)
Other Charges
Total Daily Expense
otal Reimb Daily Expense
=<Destinatior
=<Record [
:Mileage>
nb Rate Amt>
e Charge Amt>
arge Amt>
‹pense Amt>
Expense Amt>
Section Footer

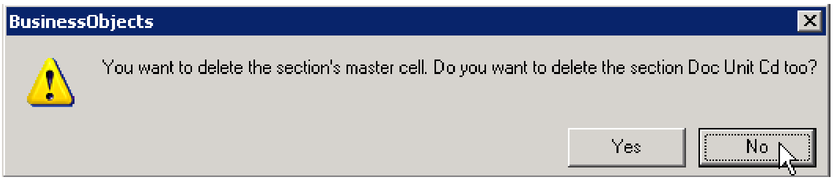
To place all the ***Master Cells*** of each section next to each other in one line, we must move each ***Master Cell*** to the lowest section in the report. In this case, the lowest section is ***Legal Nm***. In the example below, the object ***Doc Unit Cd*** is moved into the ***Legal Nm*** section.


Section: Doc Unit Cd
=<Doc Unit Cd>
Section: Legal Nm
=<Legal Nm>
=NameOf(<
=NameOf(
=NameO
=NameOf(<M
=NameOf(<Mil

NOTE: When you move a *Master Cell* outside of its section, **DO NOT** delete the section**.**

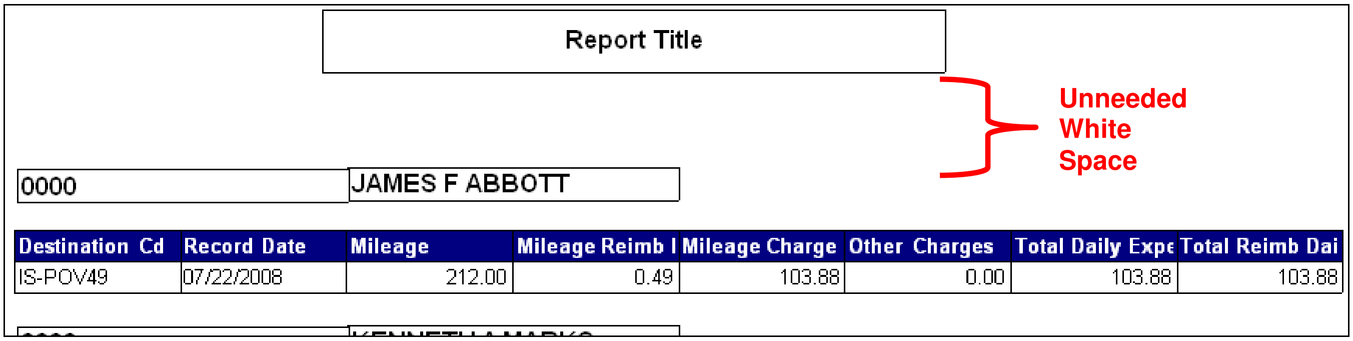
When you move a *Master Cell* from its section to another section, you will get a message asking if you want to actually delete the section, too. If you click on *Yes* then you will lose the section that you created. **You must Click on *No* in order to keep the sections on the report.**

14. Move all of the ***Master Cells*** to the ***Legal Nm*** section of your report as described.


BusinessObjects
Yes
No

You want to delete the section's master cell. Do you want to delete the section Doc Unit Cd too?

If you review the report results, you will notice that there is unneeded white space between your data and the report header.



Report Title

Unneeded White Space

0000 | JAMES F ABBOTT

Destination Cd	Record Date	Mileage	Mileage Reimb I	Mileage Charge	Other Charges	Total Daily Expe	Total Reimb Dai
IS-POV49	07/22/2008	212.00	0.49	103.88	0.00	103.88	103.88

To hide the space, we need to format each section to *Hide Section Header*.

15. In the ***Structure View***, right click in the ***Doc Unit Cd*** section, and click on ***Format Section***. The *Section Format* dialog box will appear.

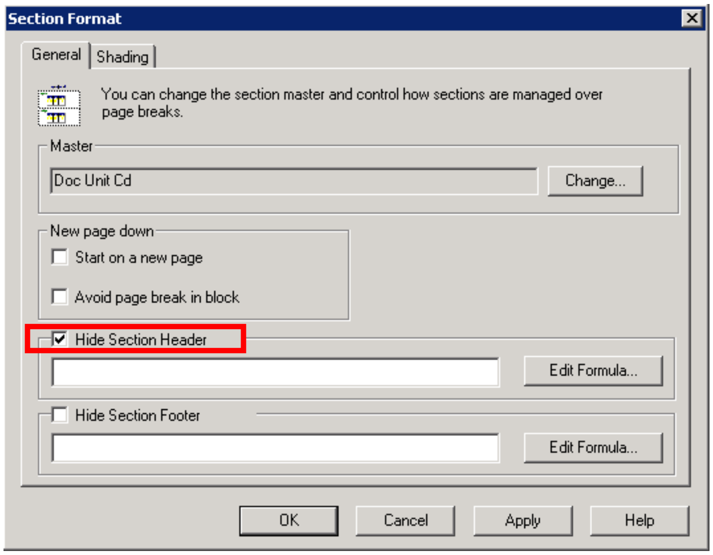
The ***General*** tab tells us that the section we are formatting is ***Doc Unit Cd***.

In the ***Master*** section, the ***Change*** button will allow us to change the object we are sectioning on. If there was another object that we should have created a section on, we could make the change here.

The ***New Page Down*** section gives us the option to start each new instance of a section on a new page or to avoid a page break in the section.

Also we have the option to hide the ***Section Header*** or ***Footer.***

We need to select ***Hide Section Header.***



Section Format

You can change the section master and control how sections are managed over page breaks.

Master: Doc Unit Cd

New page down

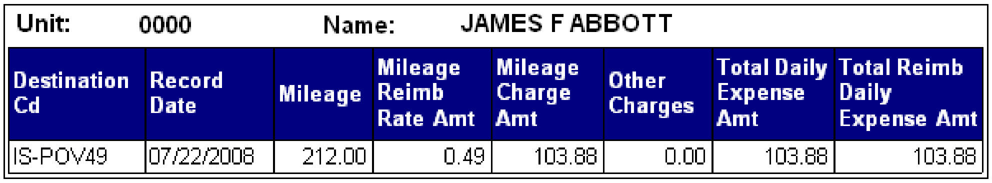
☐ Start on a new page

☐ Avoid page break in block

☑ Hide Section Header

☐ Hide Section Footer

16. Hide the ***Section Header*** for every section except for ***Legal Nm*** in order to hide the white space in the report. When you are done, format your report to appear as shown below.



Unit: 0000 Name: JAMES F ABBOTT

Destination Cd	Record Date	Mileage	Mileage Reimb Rate Amt	Mileage Charge Amt	Other Charges	Total Daily Expense Amt	Total Reimb Daily Expense Amt
IS-POV49	07/22/2008	212.00	0.49	103.88	0.00	103.88	103.88

Totals in Sections

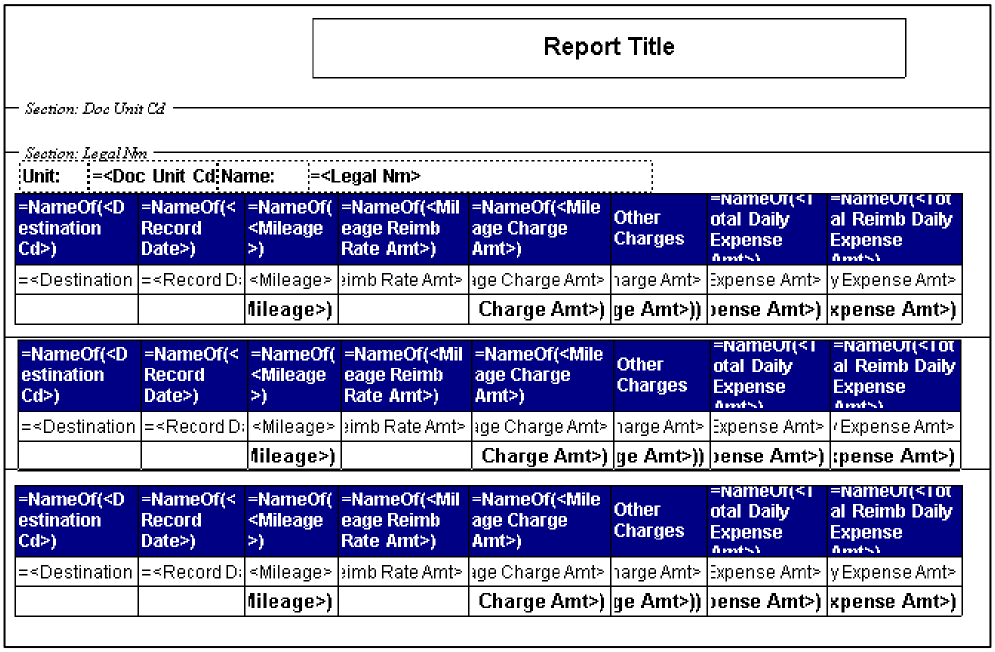
Now let's add some totals to the report for the sections.

17. Use the ***Insert Sum*** button Σ to add subtotals for ***Mileage***, ***Mileage Charge Amt***, ***Other Charges***, ***Total Daily Expense Amt***, and ***Total Reimb Daily Expense Amt***.

To get totals in each section, we have to do something a little more complex than just clicking a button. A copy of the table must be pasted into each section footer, the table header must be hidden and the data must be folded.

18. In the ***Structure View***, copy the **table** in the ***Legal Nm*** section to the ***Doc Unit Cd Section Footer*** by selecting the table, right-clicking and selecting ***Copy***.
19. Click in the ***Doc Unit Cd Section Footer*** directly under the table in the ***Legal Nm*** section, right-click and select ***Paste***.
20. Repeat ***Steps 18*** and ***19*** to copy the **table** into the ***Report Footer***.

In the figure below, the first table you see is our original table. The table directly below it is in the *Doc Unit Cd* section and the table at the bottom is in the *Report Footer*.


Report Title
Section: Doc Unit Cd
Section: Legal Nm
Unit: =<Doc Unit Cd Name: =<Legal Nm>
=NameOf(<Destination Cd>)
=NameOf(<Record Date>)
=NameOf(<Mileage>)
=NameOf(<Mileage Reimb Rate Amt>)
=NameOf(<Mileage Charge Amt>)
Other Charges
=NameOf(<Total Daily Expense Amt>)
=NameOf(<Total Reimb Daily Expense Amt>)
=<Destination
=<Record D
<Mileage>
Reimb Rate Amt>
age Charge Amt>
harge Amt>
Expense Amt>
y Expense Amt>
Mileage>)
Charge Amt>)
ge Amt>))
pense Amt>)
xpense Amt>)

21. Format the two bottom tables to **hide the table header** and to **fold the data.** This way we will only see the footer, which contains the subtotal data.

    You may also want to shade the cells in the subtotal tables, so that they will be distinct from the original table.

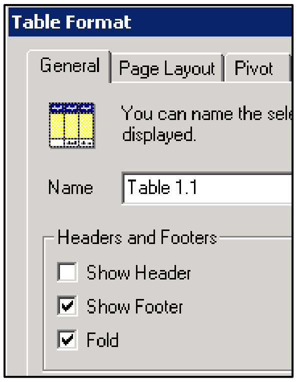


Table Format
General
Page Layout
Pivot
You can name the sel
displayed.

Name: Table 1.1

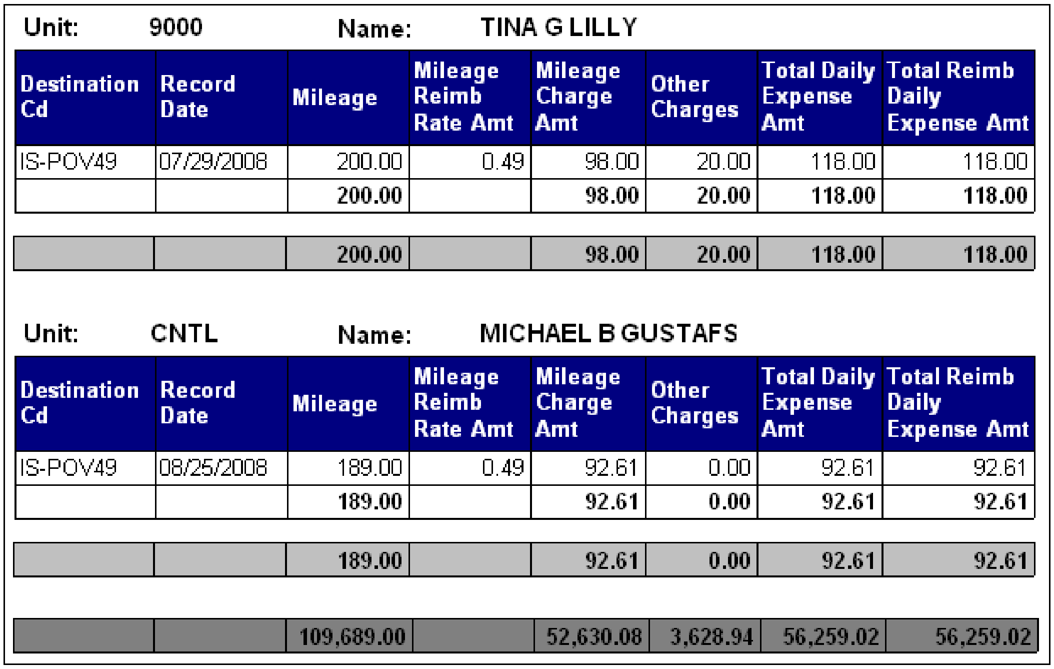
Headers and Footers

☐ Show Header

☑ Show Footer

☑ Fold

When we view the results of our changes, we see that now our report now shows a total for each instance of ***Legal Nm***, as well as for each ***Doc Unit Cd***, and a grand total at the end of the report.



Unit: 9000 Name: TINA G LILLY

Destination Cd	Record Date	Mileage	Mileage Reimb Rate Amt	Mileage Charge Amt	Other Charges	Total Daily Expense Amt	Total Reimb Daily Expense Amt
IS-POV49	07/29/2008	200.00	0.49	98.00	20.00	118.00	118.00
		200.00		**98.00**	**20.00**	**118.00**	**118.00**
		200.00		**98.00**	**20.00**	**118.00**	**118.00**

Unit: CNTL Name: MICHAEL B GUSTAFS

Destination Cd	Record Date	Mileage	Mileage Reimb Rate Amt	Mileage Charge Amt	Other Charges	Total Daily Expense Amt	Total Reimb Daily Expense Amt
IS-POV49	08/25/2008	189.00	0.49	92.61	0.00	92.61	92.61
		189.00		**92.61**	**0.00**	**92.61**	**92.61**
		189.00		**92.61**	**0.00**	**92.61**	**92.61**
		109,689.00		**52,630.08**	**3,628.94**	**56,259.02**	**56,259.02**

Since we discussed formatting table headers and moving them into report headers earlier, we will not worry about formatting table header cells on this report. We do need to mention the report header.

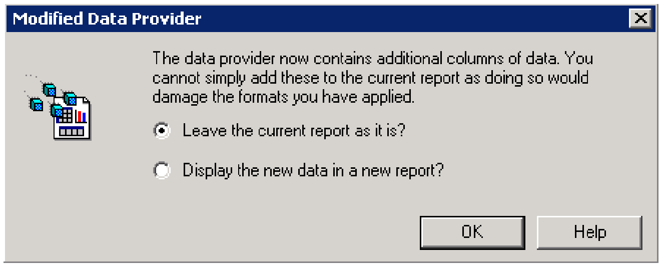
On this report, we did not include any *Department* field. For statewide reports, the user is prompted to input their *Department* so only one *Department* shows up on the report. We are using a *Training ID* set up in one *Department*, so we only see data for that *Department*. When only one *Department* is being used at a time, we can display it in the header. If we had multiple *Departments* in the report, we would make *Department* the first section in our report.

In this example, we are going to add a *Department* field to the report and drag it into the report header.

22. Edit your query to include:

Travel Header > Doc Dept Cd

23. Run the query. Indicate that you would like to leave the current report as it is.



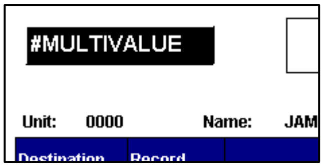
Modified Data Provider

The data provider now contains additional columns of data. You cannot simply add these to the current report as doing so would damage the formats you have applied.

● Leave the current report as it is?

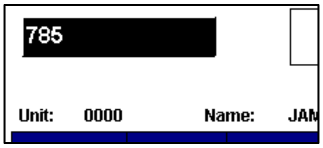
○ Display the new data in a new report?

24. If you try to drag ***Doc Dept Cd*** from the ***Report Manager*** to the ***Report Header***, Desktop Intelligence will not allow you to do this – you must drop the field into a new section. To add the field to the report header, we will **insert a blank cell** and set it **equal to** the object ***Doc Dept Cd***.



When we assign an object to a standalone cell, we will always get the ***#MULTIVALUE*** error. This is because Desktop Intelligence is trying to apply every instance of this one object to that one cell.

If you remember, to pull only one value, we may use the *Min()* or *Max()* function. This will return only one value and display the department in the cell.



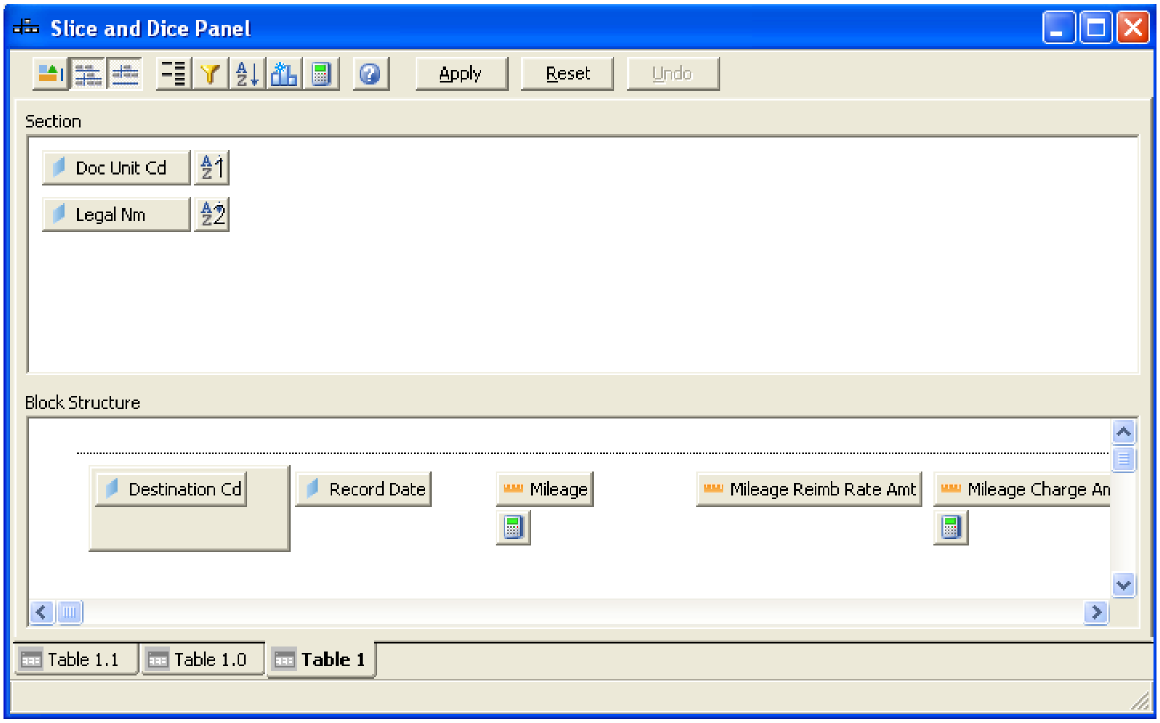
25. ***Save*** your report as ***Chapter8_Sections—YourName.***

Chapter 9: Slice-and-Dice

Slice and Dice mode enables you to switch the position of data in a report; display and remove data; rename; reset and delete blocks; turn tables and cross tabs into charts, and vise versa; and apply, edit and delete breaks, filters, sorts, rankings and calculations.

You access *Slice and Dice* mode through the *Slice and Dice Panel,* a pop-up window that provides a graphical representation of the report you are working on. You carry out *Slice and Dice* tasks by dragging icons that represent your data.

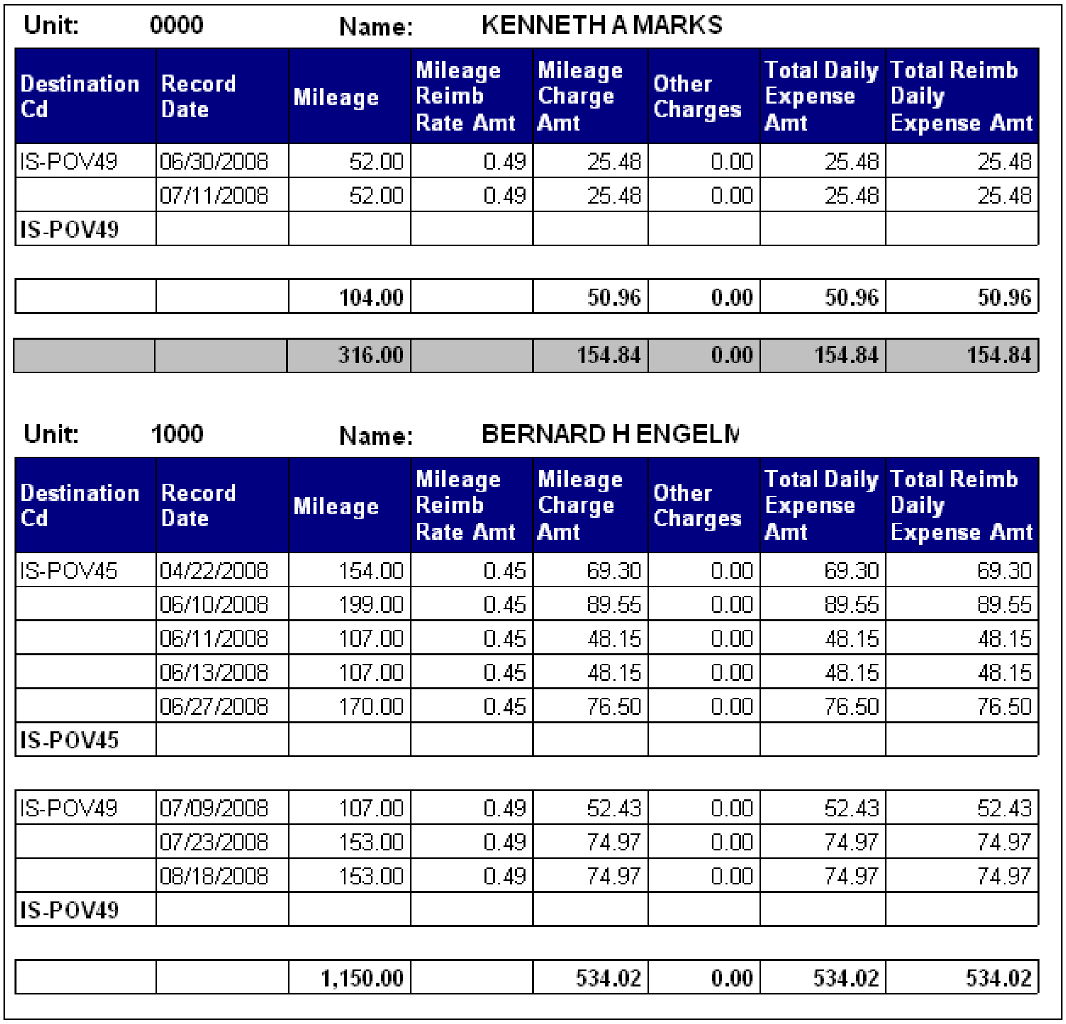
If we look at the *Slice and Dice Panel* for the *Travel* mileage report that we created and select the **Table 1** tab, we will see that there are two sections. We can also see the order of how the sections are sorted and see the *Block Structure* of our table.



Slice and Dice Panel
Apply
Reset
Undo
Section
Doc Unit Cd
Legal Nm
Block Structure
Destination Cd
Record Date
Mileage
Mileage Reimb Rate Amt
Mileage Charge An
Table 1.1
Table 1.0
Table 1

From this panel, we may do the exact same formatting as we would do in the report view. For example, we could apply a break to *Destination Cd* within this panel. Click on *Destination Cd* and then click on the *Break* button.   Click on *Apply* and you will see that the report now has a *Break* on each destination code.

Now, not only do we have sections on the report, but we have added a break.



Unit: 0000 **Name:** KENNETH A MARKS

Destination Cd	Record Date	Mileage	Mileage Reimb Rate Amt	Mileage Charge Amt	Other Charges	Total Daily Expense Amt	Total Reimb Daily Expense Amt
IS-POV49	06/30/2008	52.00	0.49	25.48	0.00	25.48	25.48
	07/11/2008	52.00	0.49	25.48	0.00	25.48	25.48
IS-POV49							

		104.00		**50.96**	**0.00**	**50.96**	**50.96**

		316.00		**154.84**	**0.00**	**154.84**	**154.84**

Unit: 1000 **Name:** BERNARD H ENGELM

Destination Cd	Record Date	Mileage	Mileage Reimb Rate Amt	Mileage Charge Amt	Other Charges	Total Daily Expense Amt	Total Reimb Daily Expense Amt
IS-POV45	04/22/2008	154.00	0.45	69.30	0.00	69.30	69.30
	06/10/2008	199.00	0.45	89.55	0.00	89.55	89.55
	06/11/2008	107.00	0.45	48.15	0.00	48.15	48.15
	06/13/2008	107.00	0.45	48.15	0.00	48.15	48.15
	06/27/2008	170.00	0.45	76.50	0.00	76.50	76.50
IS-POV45							

IS-POV49	07/09/2008	107.00	0.49	52.43	0.00	52.43	52.43
	07/23/2008	153.00	0.49	74.97	0.00	74.97	74.97
	08/18/2008	153.00	0.49	74.97	0.00	74.97	74.97
IS-POV49							

		1,150.00		**534.02**	**0.00**	**534.02**	**534.02**

This panel may be used to remove the break or remove the sections that have been created or change how the report is sorted by the sections.

26. *Save* your report again and ***Close*** it**.**

Exercise 5: Using Sections

Review

1) The tables in a section only ________________________________ on which the section was created.

2) Name two methods of creating sections.

a)

b)

3) When you move a *Master Cell* outside of its section, ______________________________.

4) How can you easily change the sectioned object to a different object?

5) How do you get totals for sections outside the *Lowest Level Section*?

6) How do you correct the ***#MULTIVALUE*** errors in cells in the *Report Header*?

7) *Slice* and *Dice* mode enables you to ____

____

8) *Slice* and *Dice* provides a __________________________________ of the report you are working on.

Hands on Instructions

Task Overview

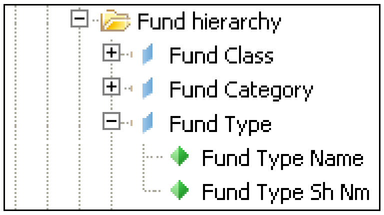
Use the report created in **Exercise 2 (*Exercise2_FormulasVariables—Your Name.*)** to practice using *Sections* in a report.

For this exercise, you will modify the query and report built in **Exercise 3** by creating *Sections* on *Fund Type,* which will be added to the query, and *Fund*. You will also practice adding additional formatting to the report that was covered in *Chapter 5: Simple Formatting*.

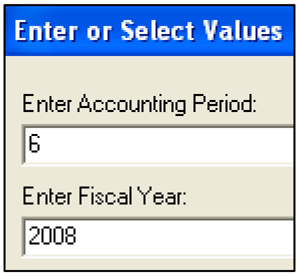
This report will use prompts but we will retrieve data for *Fiscal Year 2008* and *Accounting Period 6* only.

Procedures

1) Open and log into **Desktop Intelligence**.
2) Open ***Exercise2_FormulasVariables—Your Name.***
3) ***Save*** your report as ***Exercise5_Sections—Your Name***.
4) Remove ***Fiscal Year***, ***Accounting Period***, ***Department***, and ***Department Name*** from your report.
5) Edit your query to include ***Fund Type*** and ***Fund Type Name***.



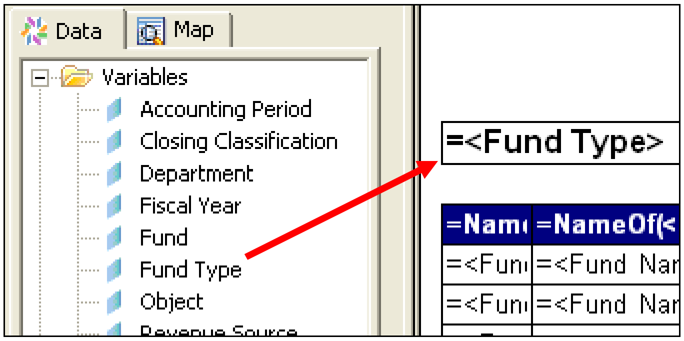
6) ***Run*** the query.
7) Use the same values for the **prompts** as in other exercises.



Enter Accounting Period:
6
Enter Fiscal Year:
2008

8) If ***Fund Type*** and ***Fund Type Name*** are automatically inserted in the table in your report, **delete** them from the table. *(Hint: Use Structure View.)*

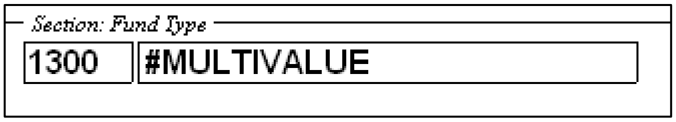
9) Create a ***Section*** on ***Fund Type*** by dragging ***Fund Type*** from the ***Report Manager***.


Data
Map
Variables
Accounting Period
Closing Classification
Department
Fiscal Year
Fund
Fund Type
Object
Revenue Source
=<Fund Type>
=Nam
=NameOf(<
=<Fun
=<Fund Nar
=<Fun
=<Fund Nar

10) Instead of creating a section on ***Fund Type Name***, insert a ***Blank Cell*** next to ***Fund Type***.

11) Insert a **formula** into the blank cell: ***=<Fund Type Name>***

Take a moment to think about why you see the ***#MULTIVALUE*** error in the blank cell instead of the *Fund Type Name* for *Fund Type 1300*.



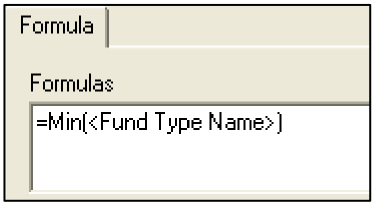
Section: Fund Type

1300	#MULTIVALUE

Because a section wasn't actually created on *Fund Type Name*, instead of showing only one instance of *Fund Type Name*, Desktop Intelligence is trying to show every instance of *Fund Type Name* for every instance of *Fund Type* in the report. Even though you only see *Fund Type 1300* listed one time above your table, there is actually an instance of *1300* for every instance of *Fund* in the report. If you review your report carefully, you will see that there is definitely more than one instance of each *Fund* shown in the report.

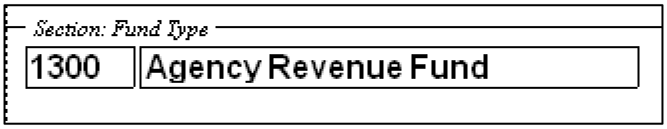
In order to correct the error, a function such as *Min()* or *Max()* must be used in order to show only one value of *Fund Type Name*.

12) Insert ***Min()*** into the formula you created in the blank cell. ***=Min(<Fund Type Name>)***



Formulas

=Min(<Fund Type Name>)



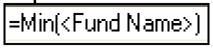
Section: Fund Type

1300	Agency Revenue Fund

13) Create a ***Section*** on ***Fund*** the same way you did for *Fund Type*. By dragging ***Fund*** from the ***Report Manager***, *Fund* will be left in the table.

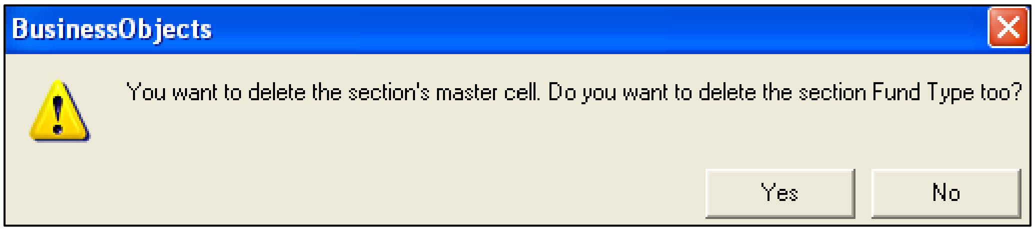
Since you have created a break on Fund, you will need to manually delete *Fund* and *Fund Name* from the report. Also, you will notice that *Fund Type Name* was moved to the *Lowest Level Section*. This is ok because you will move *Fund Type* to the lowest level also. You may align them once *Fund Type* has been moved.

14) Delete ***Fund*** and ***Fund Name*** from the table. *(Hint: Use Structure View.)*

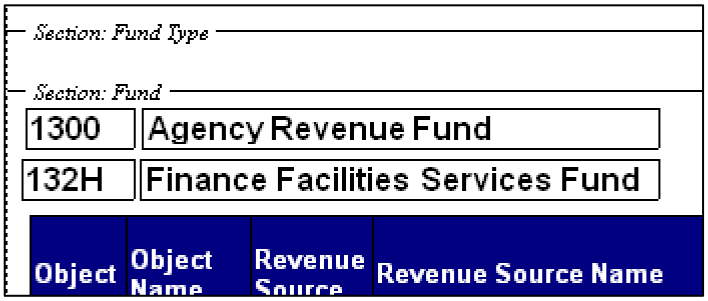
15) Insert a **blank cell** and set it equal to ***Fund Name***. Don't forget to use a *Min()* or *Max()* function in order to return one value. 

=Min(<Fund Name>)

16) Drag the cell for ***Fund Type Name*** into the ***Fund Section***. Select **"NO"** when asked if you want to delete the section on ***Fund Type***.



You want to delete the section's master cell. Do you want to delete the section Fund Type too?



Section: Fund Type

Section: Fund

1300 Agency Revenue Fund

132H Finance Facilities Services Fund

Object	Object Name	Revenue Source	Revenue Source Name

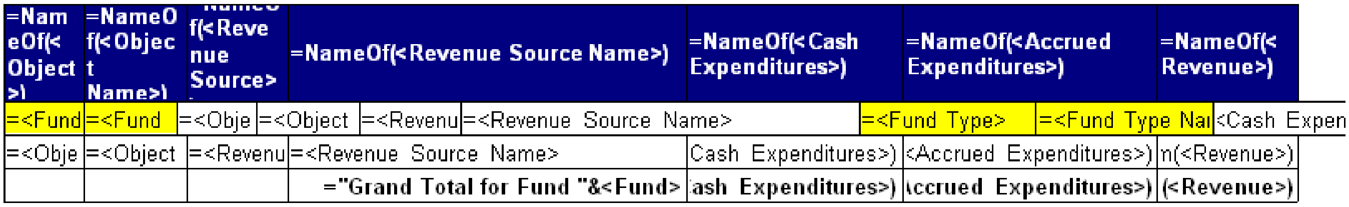
17) Add totals to the ***Cash Expenditure***, ***Accrued Expenditure***, and ***Revenue*** columns using the button Σ.

18) Make the ***Revenue Source Name*** field wider and change the "***Sum:***" label to read ""***Grand Total for Fund" &<Fund>***" (as shown on the next page).

In order to show a grand total for the report, you must also create totals in each section footer.

You will find as you build more reports that it is important to work in *Structure View* so that you can see what is going on with the structure of the table in your report. In the image below, you will see that *Fund, Fund Name, Fund Type,* and *Fund Type Name* are still in the data row of the table. When those objects are deleted, Desktop Intelligence sometimes fails to delete them from the data row. Had the objects been deleted in *Structure View*, all rows would have been deleted.

19) In ***Structure View***, look to see if ***Fund, Fund Name, Fund Type****,* or ***Fund Type Name*** still exist in your table. If they do, click on the **individual cell** and **delete** the object from the table.

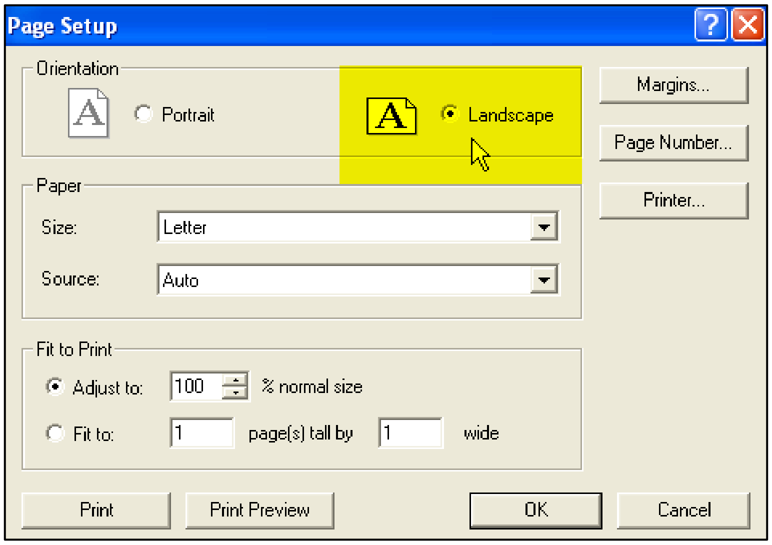


=NameOf(<Object>)	=NameOf(<Object Name>)	f(<Revenue Source>	=NameOf(<Revenue Source Name>)	=NameOf(<Cash Expenditures>)	=NameOf(<Accrued Expenditures>)	=NameOf(<Revenue>)

=<Fund	=<Fund	=<Obje	=<Object	=<Revenu	=<Revenue Source Name>	=<Fund Type>	=<Fund Type Nai	<Cash Expen

=<Obje	=<Object	=<Revenu	=<Revenue Source Name>	Cash Expenditures>)	<Accrued Expenditures>)	n(<Revenue>)
			="Grand Total for Fund "&<Fund>	ash Expenditures>)	ccrued Expenditures>)	(<Revenue>)

20) In ***Page Setup*** found under ***File*** on the menu bar, change the **orientation** of the paper to ***Landscape*** so that your table will not overflow to a second page.

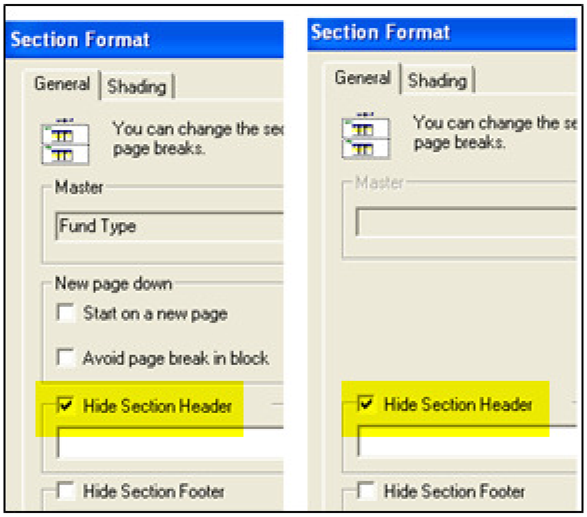

Page Setup
Orientation
○ Portrait
● Landscape
Margins...
Page Number...
Printer...
Paper
Fit to Print
○ Fit to:
page(s) tall by
wide
Print
Print Preview
OK
Cancel

Size: Letter

Source: Auto

● Adjust to: 100 % normal size

21) Hide the ***Section Header*** for the ***Fund Type Section*** and the ***Main Header Section*** in order to clean up some unneeded space.


Section Format
General
Shading
You can change the se
page breaks.
New page down
☐ Start on a new page
☐ Avoid page break in block
☐ Hide Section Footer
Section Format
General
Shading
You can change the se
page breaks.
Master
☐ Hide Section Footer

Master: Fund Type

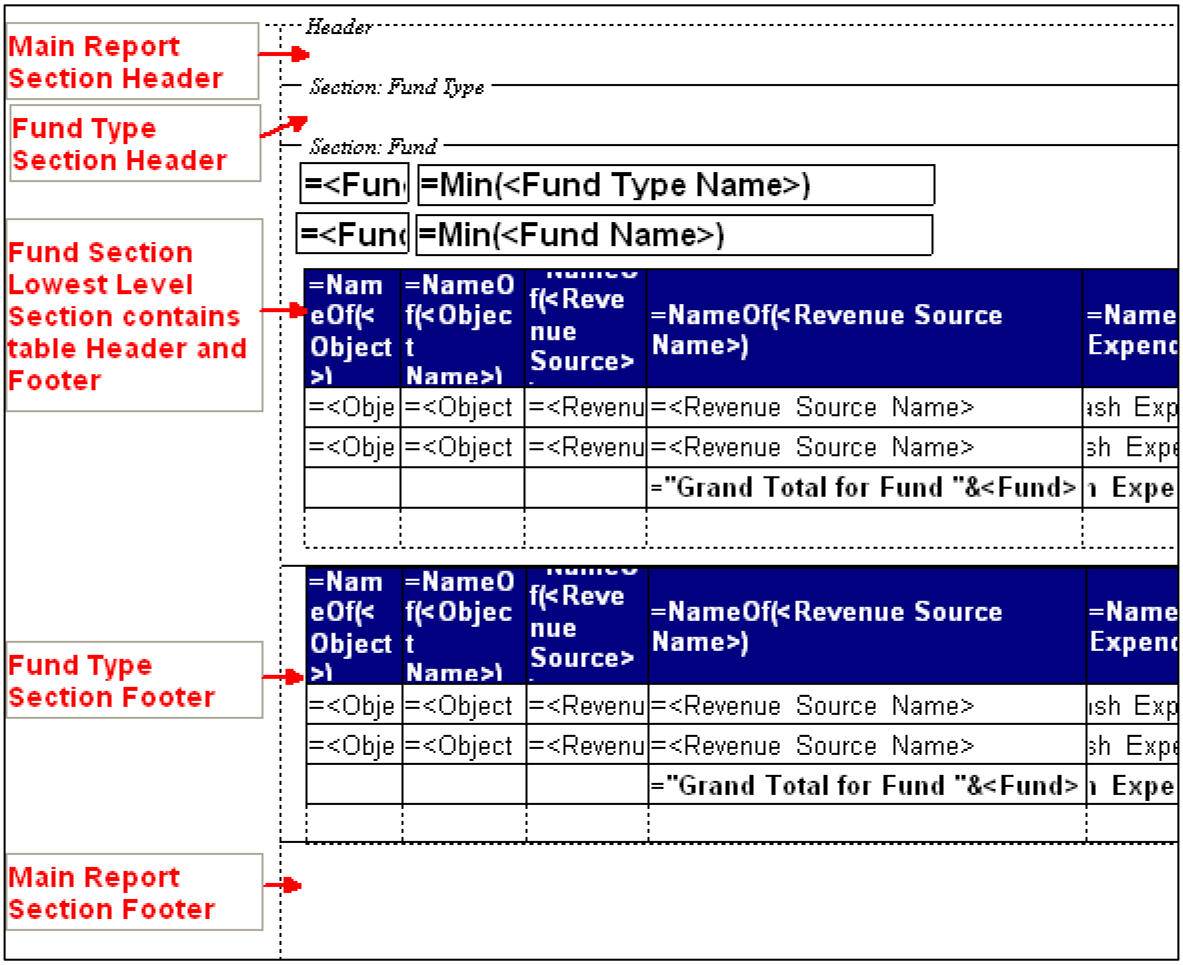
☑ Hide Section Header

☑ Hide Section Header

Totals for each *Fund Type* and a grand total for the entire report need to be created. In Web Intelligence, this could be done by adding individual cells in each section footer and typing in formulas. In Desktop Intelligence, we can copy the table from the *Fund Section* into the *Fund Type Section Footer* and also into *Main Section Footer* of the report. On the copied tables, the *Table Headers* need to be hidden and the data needs to be folded so that only the *Table Footers* are shown. (Folding is not possible in Web Intelligence, and Desktop Intelligence reports with folding will not easily convert.)

22) Copy the **table** found in the ***Fund Section*** to the ***Fund Type Section Footer.***

23) Align the **table** in the ***Fund Type Section Footer*** with the **table** in the ***Fund Section.***


Main Report Section Header
Fund Type Section Header
Fund Section Lowest Level Section contains table Header and Footer
Fund Type Section Footer
Main Report Section Footer
Header
Section: Fund Type
Section: Fund

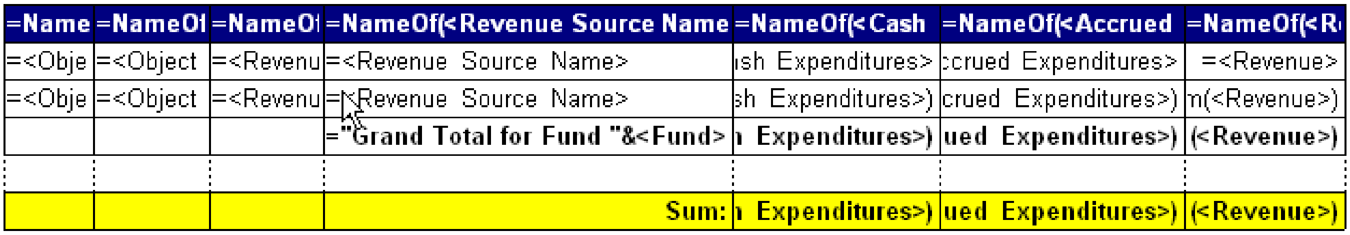
=<Fun =Min(<Fund Type Name>)

=<Fun =Min(<Fund Name>)

=NameOf(< Object >)	=NameOf(<Object Name>)	f(<Revenue Source>	=NameOf(<Revenue Source Name>)	=Name Expend
=<Obje	=<Object	=<Revenu	=<Revenue Source Name>	ish Exp
=<Obje	=<Object	=<Revenu	=<Revenue Source Name>	sh Expe
			="Grand Total for Fund "&<Fund>	n Expe

=NameOf(< Object >)	=NameOf(<Object Name>)	f(<Revenue Source>	=NameOf(<Revenue Source Name>)	=Name Expend
=<Obje	=<Object	=<Revenu	=<Revenue Source Name>	ish Exp
=<Obje	=<Object	=<Revenu	=<Revenue Source Name>	sh Expe
			="Grand Total for Fund "&<Fund>	n Expe

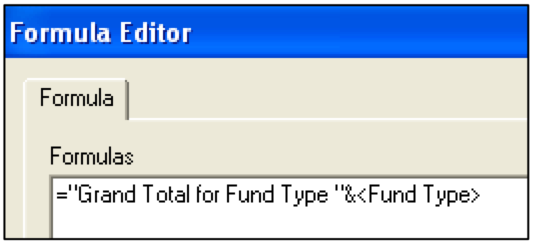
24) On the **copied table**, insert a **grand total sum** by clicking on each **variable** and clicking on ***Insert Sum.***



=Name	=NameO	=NameO	=NameOf(<Revenue Source Name	=NameOf(<Cash	=NameOf(<Accrued	=NameOf(<R
=<Obje	=<Object	=<Revenu	=<Revenue Source Name>	ish Expenditures>	ccrued Expenditures>	=<Revenue>
=<Obje	=<Object	=<Revenu	=<Revenue Source Name>	sh Expenditures>)	crued Expenditures>)	m(<Revenue>)
			="Grand Total for Fund "&<Fund>	n Expenditures>)	ued Expenditures>)	(<Revenue>)
			Sum:	n Expenditures>)	ued Expenditures>)	(<Revenue>)

25) In the **grand total row**, insert a **formula** to show "***Grand Total for Fund Type***" so that the *Fund Type* shown will change each time the *Fund Type* changes.

="Grand Total for Fund Type "&<Fund Type>


Formula Editor
Formula
Formulas
="Grand Total for Fund Type "&<Fund Type>

26) On the **copied table**, open ***Format Table*** and uncheck ***Show Header***, check ***Show Footer*** and ***Fold***. This will hide the table's header, show the total footer so you will have a total for *Fund Type*, and hide the data in the table so that we only see summed information.

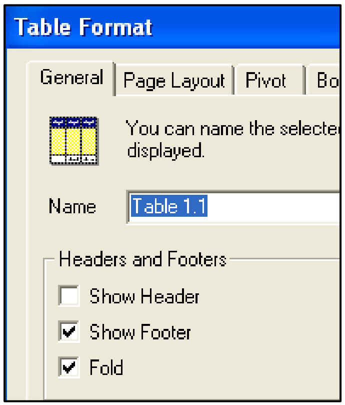


Table Format
General
Page Layout
Pivot
Bo
You can name the selecte displayed.

Name: Table 1.1

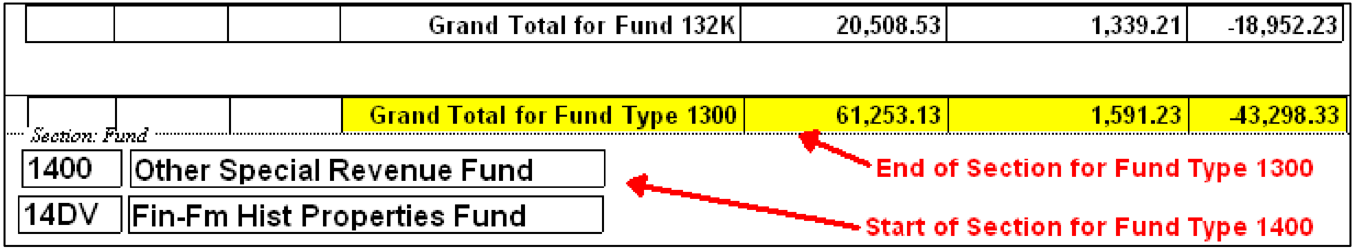
Headers and Footers

☐ Show Header

☑ Show Footer

☑ Fold

27) **View your report** and scroll down until you see a grand total for ***Fund Type 1300***.


Grand Total for Fund 132K | 20,508.53 | 1,339.21 | -18,952.23

Grand Total for Fund Type 1300 | 61,253.13 | 1,591.23 | -43,298.33

Section: Fund

1400 | Other Special Revenue Fund

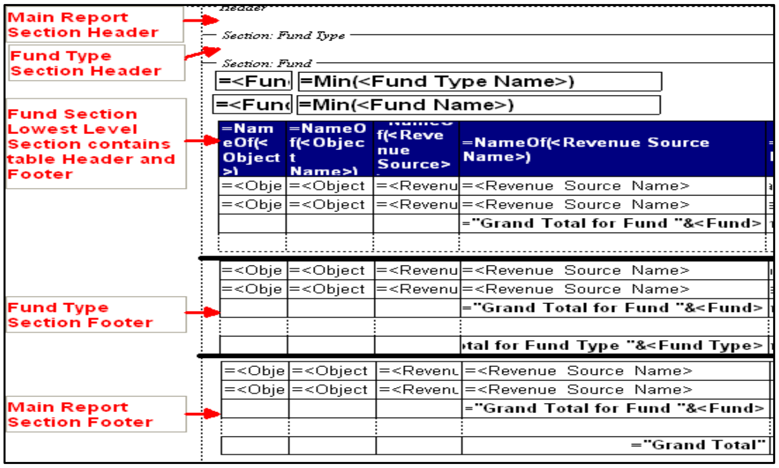
14DV | Fin-Fm Hist Properties Fund

End of Section for Fund Type 1300
Start of Section for Fund Type 1400

28) In ***Structure View***, copy the **table** in the ***Fund Type Section Footer*** to the ***Main Report Section Footer*** so that the report will show a grand total for all ***Fund Types*** in the report. By formatting the first table you copied and then copying it into other section footers, the only modification needed will be to the formula that shows the "*Grand Total…*" text.

29) After you copy the **table** into the ***Main Report Section Footer***, change the **formula** that shows the "*Grand Total…*" text to "***Grand Total***"

30) While still in ***Structure View***, your report should look similar to the image shown to the right.


Main Report Section Header
Fund Type Section Header
Fund Section Lowest Level Section contains table Header and Footer
Fund Type Section Footer
Main Report Section Footer
Header
Section: Fund Type
Section: Fund
=<Fun | =Min(<Fund Type Name>)

=<Fund | =Min(<Fund Name>)

=NameOf(<Object>) | =NameOf(<Object Name>) | f(<Revenue Source> | =NameOf(<Revenue Source Name>)

=<Obje | =<Object | =<Revenu | =<Revenue Source Name>

=<Obje | =<Object | =<Revenu | =<Revenue Source Name>

="Grand Total for Fund "&<Fund>

=<Obje | =<Object | =<Revenu | =<Revenue Source Name>

=<Obje | =<Object | =<Revenu | =<Revenue Source Name>

="Grand Total for Fund "&<Fund>

tal for Fund Type "&<Fund Type>

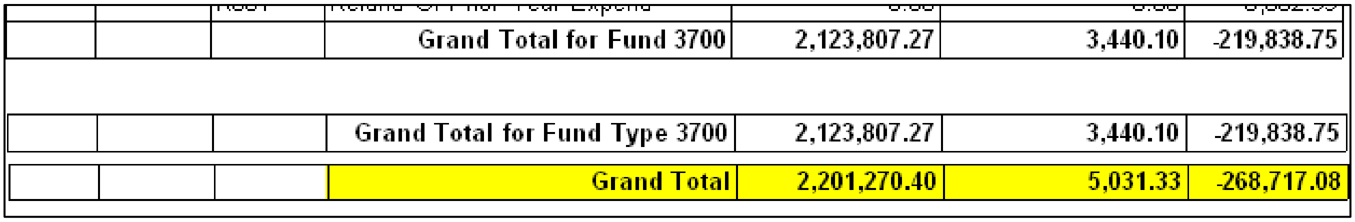
=<Obje | =<Object | =<Revenu | =<Revenue Source Name>

=<Obje | =<Object | =<Revenu | =<Revenue Source Name>

="Grand Total for Fund "&<Fund>

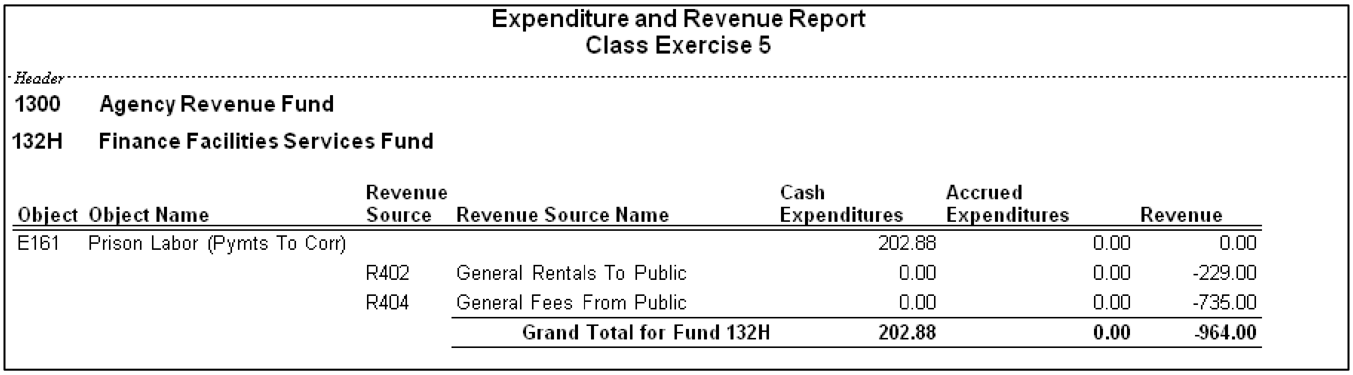
="Grand Total"

31) **View the report** and go the very **last page.** You should see the *Grand Total* of all *Expenditures* and *Revenue* for your report.



			Grand Total for Fund 3700	2,123,807.27	3,440.10	-219,838.75
			Grand Total for Fund Type 3700	2,123,807.27	3,440.10	-219,838.75
			Grand Total	2,201,270.40	5,031.33	-268,717.08

32) Now that you have your report broken down and sectioned off, **practice using the available formatting** to **create a report title**, **adjust number formatting**, **remove border lines around cells** in the table and in sections, and **change the table header** so that the background color and font are easier to read.



Expenditure and Revenue Report
Class Exercise 5

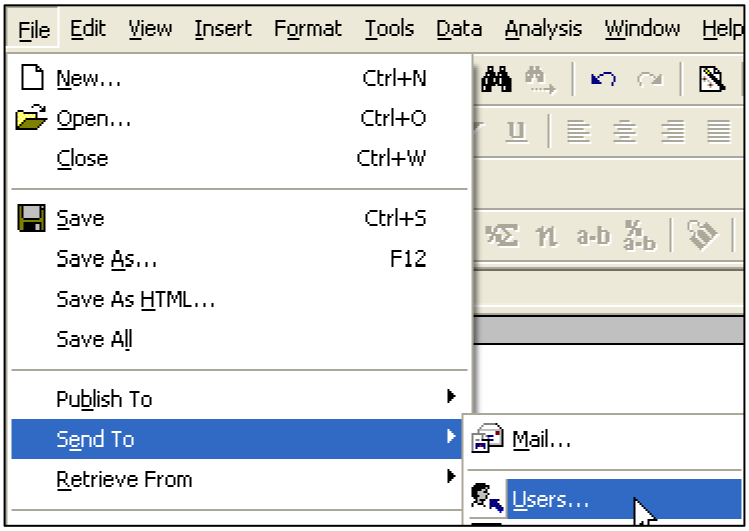
1300 Agency Revenue Fund

132H Finance Facilities Services Fund

Object	Object Name	Revenue Source	Revenue Source Name	Cash Expenditures	Accrued Expenditures	Revenue
E161	Prison Labor (Pymts To Corr)			202.88	0.00	0.00
		R402	General Rentals To Public	0.00	0.00	-229.00
		R404	General Fees From Public	0.00	0.00	-735.00
			Grand Total for Fund 132H	202.88	0.00	-964.00

33) ***Save*** your report.

34) ***Send*** the report to your **eMARS ID** if you wish to use this report at your office. Detailed instructions may be found in ***Appendix N: Retrieve/Publish/Send/Save Reports***.


File
Edit
View
Insert
Format
Tools
Data
Analysis
Window
Help
New... Ctrl+N
Open... Ctrl+O
Close Ctrl+W
Save Ctrl+S
Save As... F12
Save As HTML...
Save All
Publish To
Send To
Retrieve From
Mail...
Users...

35) ***Close*** your report.

Chapter 10: Breaks

Preparing the Report

Before we can look at breaks, we need to prepare a report which requires breaking.

1) Open the report titled ***Chapter3_Creating a Report—YourName***.

2) Go ahead and ***Save*** the report as ***Chapter10_Breaks—YourName.***

3) For now, remove ***Closing Classification*** and ***Posting Amount*** from the table.

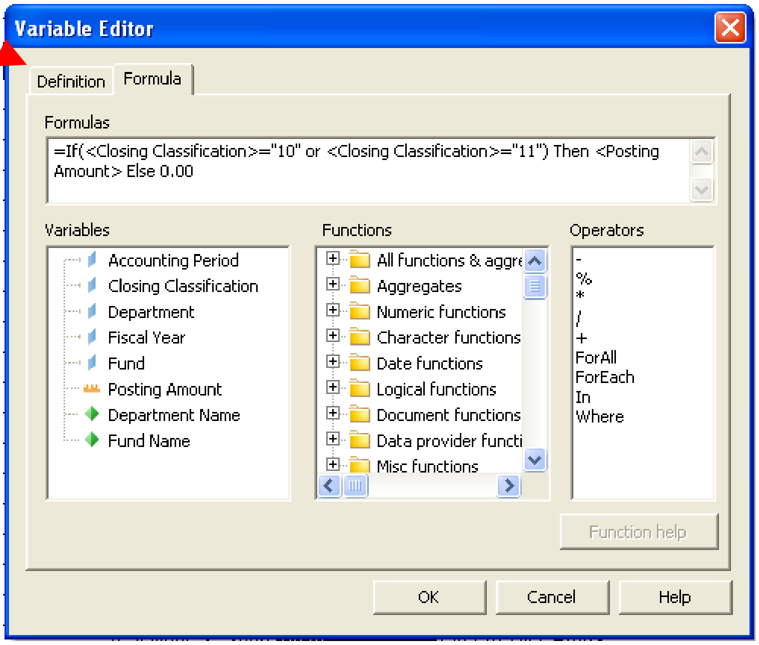
The variables we need in our report should contain the following formulas:

Expenditures	**=If (<Closing Classification>="10" or <Closing Classification>="11") Then <Posting Amount> Else 0.00**
Revenue	**=If (<Closing Classification>="14" or <Closing Classification>="15") Then <Posting Amount> Else 0.00**

Note that these formulas do not follow the "flag" rule. We will see in this chapter why using flags simplifies reports.

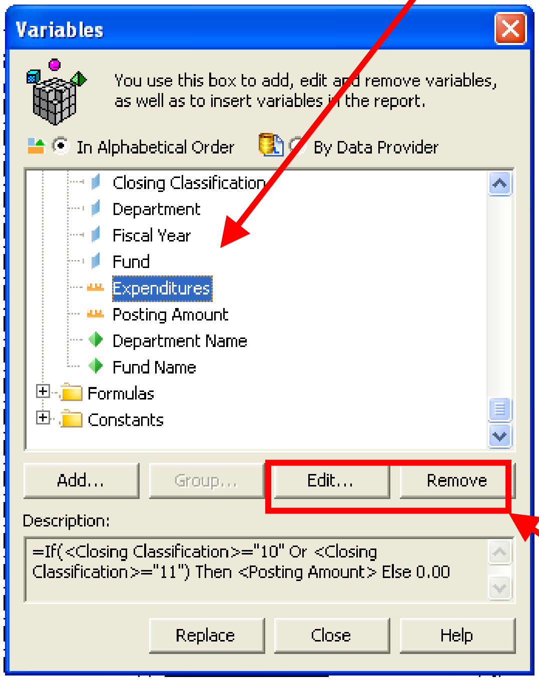
4) Click **Data > Variables** to open the Variable Editor, then click **Add.** On the *Definition* tab, enter "Expenditures" and choose the qualification "Measure". On the *Formula* tab, we are going to define our formula.

=If (<Closing Classification>="10" or <Closing Classification>="11") Then <Posting Amount> Else 0.00


Variable Editor
Definition
Formula
Formulas
Variables
Accounting Period
Closing Classification
Department
Fiscal Year
Fund
Posting Amount
Department Name
Fund Name
Functions
All functions & aggre
Aggregates
Numeric functions
Character functions
Date functions
Logical functions
Document functions
Data provider functi
Misc functions
Operators
-
%
*
/
+
ForAll
ForEach
In
Where
Function help
OK
Cancel
Help

Formulas: =If(<Closing Classification>="10" or <Closing Classification>="11") Then <Posting Amount> Else 0.00

5) Click on ***OK,*** and the variable will show up in the *Variables Class* in the *Variables* dialog box.

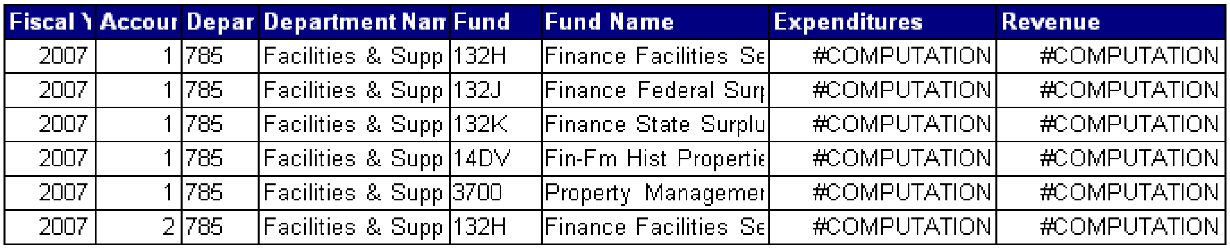

Variables
You use this box to add, edit and remove variables, as well as to insert variables in the report.
In Alphabetical Order
By Data Provider
Closing Classification
Department
Fiscal Year
Fund
Expenditures
Posting Amount
Department Name
Fund Name
Formulas
Constants
Add...
Group...
Edit...
Remove
Description:
Replace
Close
Help

Description: =If(<Closing Classification>="10" Or <Closing Classification>="11") Then <Posting Amount> Else 0.00

You may also use the *Variables* dialog box to edit or remove existing variables.

6) Click on ***Add*** again and add the *Revenue* variable.

7) Once you have created the *Revenue* variable, drag both **variables** that you created onto your report after ***Fund Name.***



Fiscal Y	Accour	Depar	Department Nan	Fund	Fund Name	Expenditures	Revenue
2007	1	785	Facilities & Supp	132H	Finance Facilities Se	#COMPUTATION	#COMPUTATION
2007	1	785	Facilities & Supp	132J	Finance Federal Surp	#COMPUTATION	#COMPUTATION
2007	1	785	Facilities & Supp	132K	Finance State Surplu	#COMPUTATION	#COMPUTATION
2007	1	785	Facilities & Supp	14DV	Fin-Fm Hist Propertie	#COMPUTATION	#COMPUTATION
2007	1	785	Facilities & Supp	3700	Property Managemer	#COMPUTATION	#COMPUTATION
2007	2	785	Facilities & Supp	132H	Finance Facilities Se	#COMPUTATION	#COMPUTATION

After you add the variables to the table, you should get an error message ***#COMPUTATION.***

The error was received because an object that was used in the variable's formula is not present in the table. If you remember, we removed *Closing Classification* from our table. In order to use *Closing Classification* in our variable, it must be present in the table. In Desktop Intelligence, an easy method to adding an element to the table is to use the *Pivot* tab in *Table Format*.

8) Click on the **table** then right click and choose ***Format Table***. The *Table Format* dialog box will appear.

9) Click on the ***Pivot*** tab.

10) Under ***Available Variables***, click on ***Closing Classification*** and ***Add*** the object to the ***Body*** folder under ***Used Variables***. After you have added *Closing Classification* to the table you will need to **hide it**.

11) Click on ***Closing Classification*** after it shows up under ***Used Variables.*** At this point, *Closing Classification* may be hidden so that it won't show on the report.

12) Click on ***Closing Classification*** and then click ***Hide***.

13) Click ***OK.***

This will add the object to your table so that the variables will produce data and not an error. But it also hides the object so it will not be seen in your report.

Another way to add an object to a report is to drag it from the *Report Manager* on to the table.

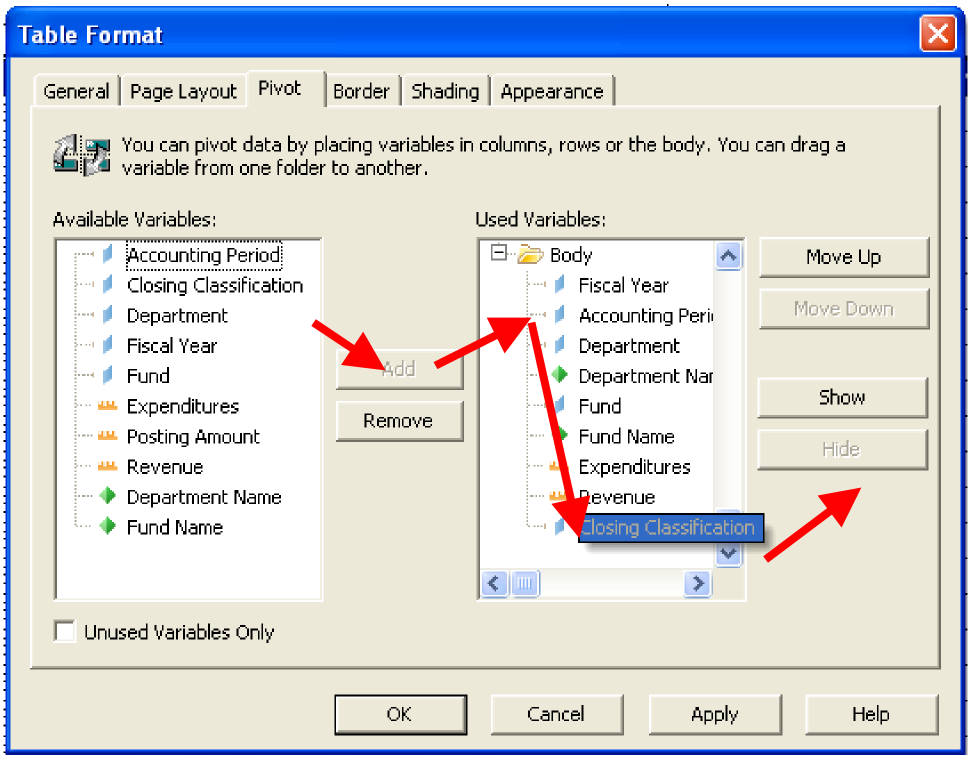
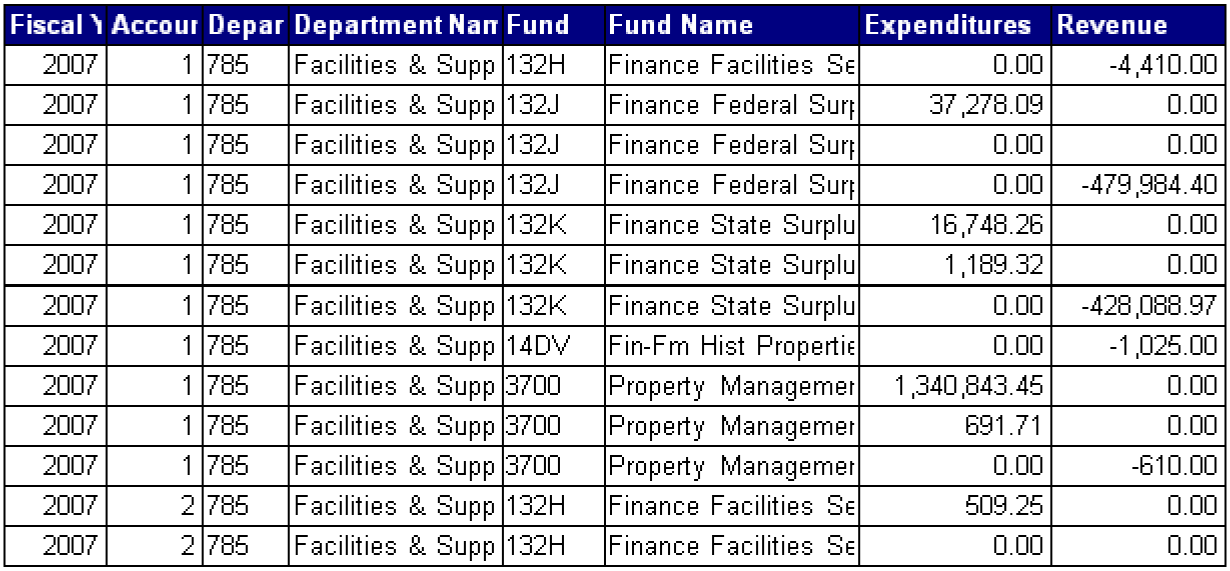


Table Format
General
Page Layout
Pivot
Border
Shading
Appearance

You can pivot data by placing variables in columns, rows or the body. You can drag a variable from one folder to another.

Available Variables:
Accounting Period
Closing Classification
Department
Fiscal Year
Fund
Expenditures
Posting Amount
Revenue
Department Name
Fund Name
Add
Remove
Used Variables:
Body
Fiscal Year
Accounting Peri
Department
Department Nar
Fund
Fund Name
Expenditures
Revenue
Closing Classification
Move Up
Move Down
Show
Hide
Unused Variables Only
OK
Cancel
Apply
Help

Now values will show up under the *Expenditures* and *Revenue* fields.



Fiscal Y	Accour	Depar	Department Nan	Fund	Fund Name	Expenditures	Revenue
2007	1	785	Facilities & Supp	132H	Finance Facilities Se	0.00	-4,410.00
2007	1	785	Facilities & Supp	132J	Finance Federal Sur	37,278.09	0.00
2007	1	785	Facilities & Supp	132J	Finance Federal Sur	0.00	0.00
2007	1	785	Facilities & Supp	132J	Finance Federal Sur	0.00	-479,984.40
2007	1	785	Facilities & Supp	132K	Finance State Surplu	16,748.26	0.00
2007	1	785	Facilities & Supp	132K	Finance State Surplu	1,189.32	0.00
2007	1	785	Facilities & Supp	132K	Finance State Surplu	0.00	-428,088.97
2007	1	785	Facilities & Supp	14DV	Fin-Fm Hist Propertie	0.00	-1,025.00
2007	1	785	Facilities & Supp	3700	Property Managemer	1,340,843.45	0.00
2007	1	785	Facilities & Supp	3700	Property Managemer	691.71	0.00
2007	1	785	Facilities & Supp	3700	Property Managemer	0.00	-610.00
2007	2	785	Facilities & Supp	132H	Finance Facilities Se	509.25	0.00
2007	2	785	Facilities & Supp	132H	Finance Facilities Se	0.00	0.00

14) Save the report.

How to Create a Break

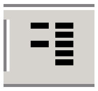
A *Break* is a division in a table in which data is grouped into parts according to a selected value. These parts are represented as *smaller tables*. You use breaks to display all the data for each unique value of a *Dimension Object* in separate tables. Using breaks is advantageous because it allows you to display subtotals and is an efficient way to organize how your data is represented.

Scenario: Your boss would like to see the report broken down by *Fund* with *Expenditures* and *Revenues* on one line verses many lines for each *Fund*. Also, the report does not need to be broken down by *Fiscal Year, Accounting Period, Department* or *Department Name.*

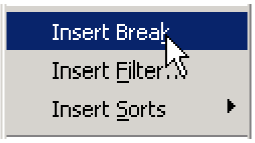
1) Remove ***Fiscal Year***, ***Accounting Period***, ***Department*** and ***Department Name*** from the report.

We will start with creating a break on *Fund*.

There are three different ways that you can insert a break on *Fund*.



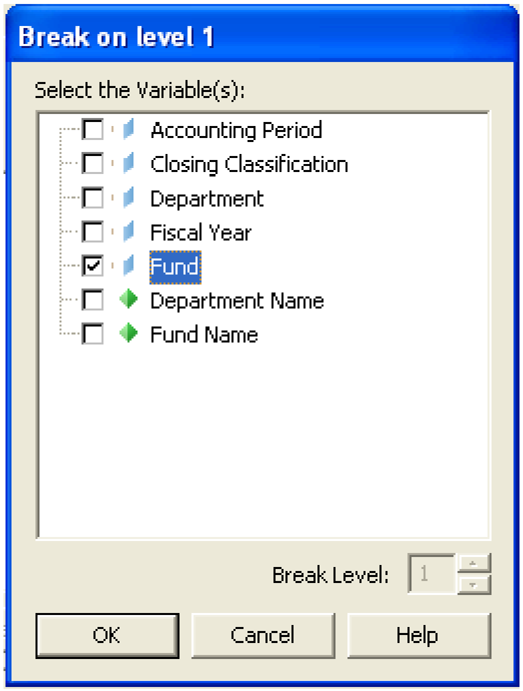
First, you may create a break by clicking on the toolbar icon *Insert Break*



The second way to create a break is to click on the *Fund* field, right click and then choose *Insert Break*.

The third way is to click on *Format* and then *Breaks*. This will open up a screen that will allow you to *Add* an object to break on. The *Format Breaks* option also allows you to change the order of breaks, turn on/off the break header/footer, remove or show duplicates and fold the data on a break.

2) Click on ***Fund*** and use one of the methods described to **insert a break**.



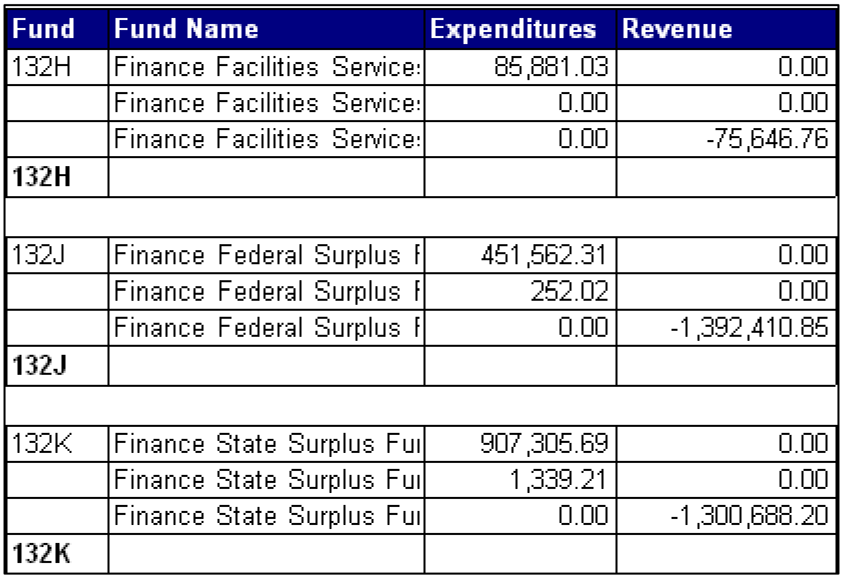
Break on level 1

Select the Variable(s):

- ☐ Accounting Period
- ☐ Closing Classification
- ☐ Department
- ☐ Fiscal Year
- ☑ Fund
- ☐ Department Name
- ☐ Fund Name

Break Level: 1

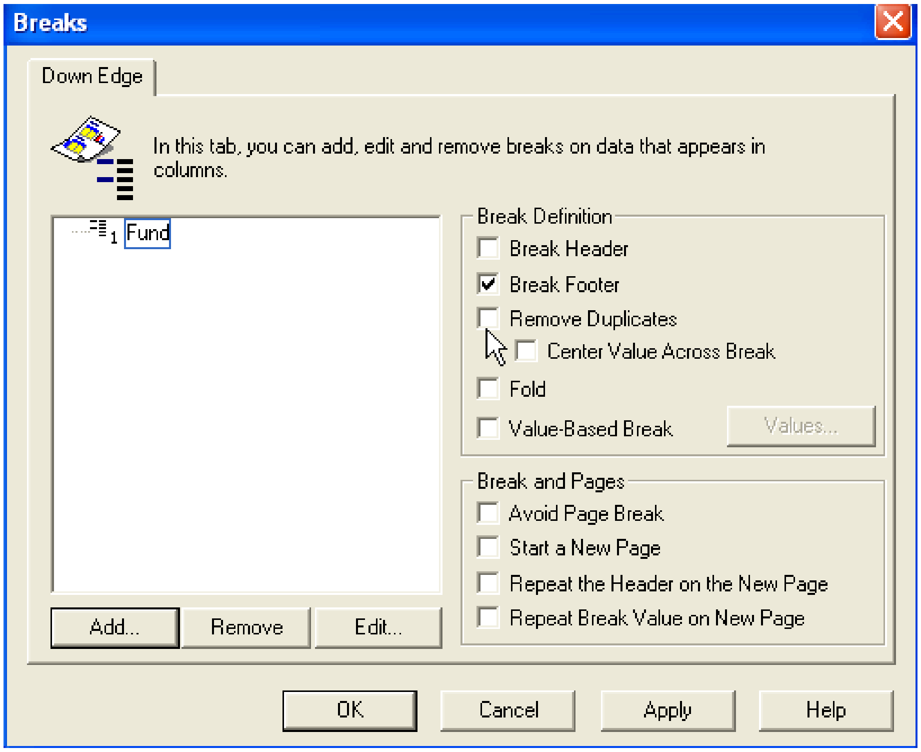
You should now have something that looks similar to this:



Fund	Fund Name	Expenditures	Revenue
132H	Finance Facilities Service:	85,881.03	0.00
	Finance Facilities Service:	0.00	0.00
	Finance Facilities Service:	0.00	-75,646.76
132H			
132J	Finance Federal Surplus F	451,562.31	0.00
	Finance Federal Surplus F	252.02	0.00
	Finance Federal Surplus F	0.00	-1,392,410.85
132J			
132K	Finance State Surplus Fu	907,305.69	0.00
	Finance State Surplus Fu	1,339.21	0.00
	Finance State Surplus Fu	0.00	-1,300,688.20
132K			

3) Click on ***Format > Breaks***.

4) When the *Breaks* dialog box appears, click the **break on *Fund*** and ***uncheck the Remove Duplicates*** option. This will allow *Fund* to be shown on every line.



In this tab, you can add, edit and remove breaks on data that appears in columns.

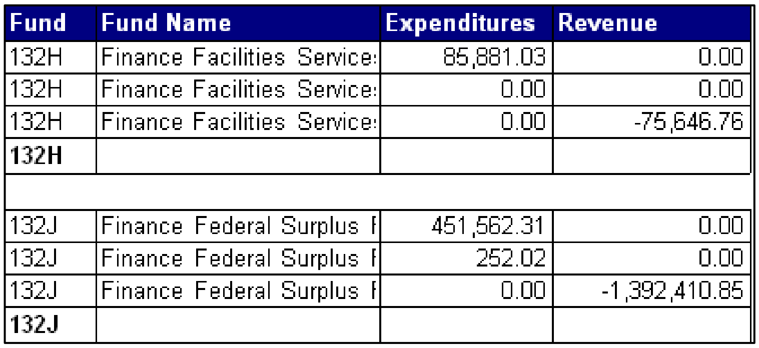
Break Definition
☐ Break Header
☑ Break Footer
☐ Remove Duplicates
☐ Center Value Across Break
☐ Fold
☐ Value-Based Break

Break and Pages
☐ Avoid Page Break
☐ Start a New Page
☐ Repeat the Header on the New Page
☐ Repeat Break Value on New Page

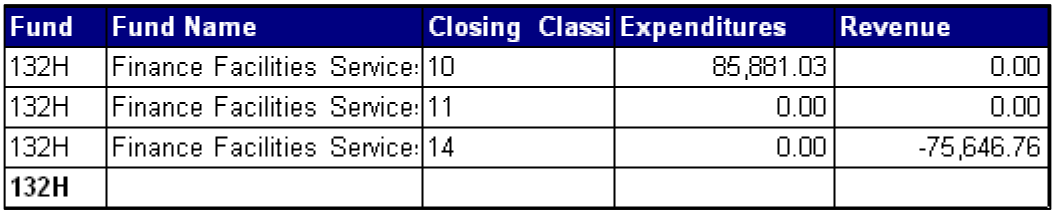
5) Click ***OK.***

Your report may be left as is, but it would look cleaner if the amounts are on one line.

In the image below, you will see that there are multiple rows for each *Fund*. This is due to *Closing Classification*, which is actually hidden on the table (shown unhidden in the second screen shot). Each *Closing Classification* is represented on one row. By doing some additional formatting to the break that we have created, we may create a report that is much more organized and functional.



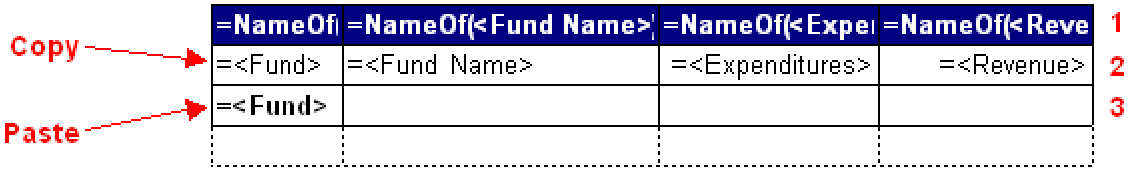
Fund	Fund Name	Expenditures	Revenue
132H	Finance Facilities Service:	85,881.03	0.00
132H	Finance Facilities Service:	0.00	0.00
132H	Finance Facilities Service:	0.00	-75,646.76
132H			
132J	Finance Federal Surplus I	451,562.31	0.00
132J	Finance Federal Surplus I	252.02	0.00
132J	Finance Federal Surplus I	0.00	-1,392,410.85
132J			



Fund	Fund Name	Closing Classi	Expenditures	Revenue
132H	Finance Facilities Service:	10	85,881.03	0.00
132H	Finance Facilities Service:	11	0.00	0.00
132H	Finance Facilities Service:	14	0.00	-75,646.76
132H				

Formatting Breaks

6) Go to the ***Structure View*** of the report. Now we are going to do additional formatting to clean up the report and make it more simplified.



=NameOf	=NameOf(<Fund Name>	=NameOf(<Expe	=NameOf(<Reve
=<Fund>	=<Fund Name>	=<Expenditures>	=<Revenue>
=<Fund>			

If you notice in the image above, there are three rows in *Structure View*.

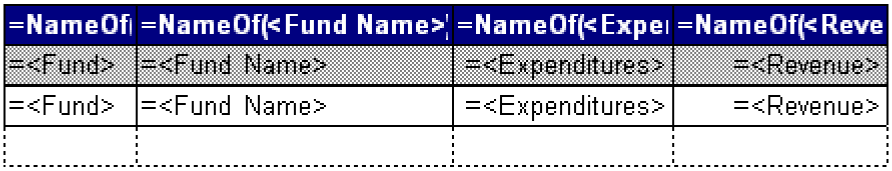
- The first row (1), the shaded top row, is actually the table header row. This row contains the column header names in your report.
- The second row (2) is the data in the table. This is the row that displays the data in the table in *Results View*.
- The next row (3) is the break footer. The break footer displays sub-totals (summary information) for any breaks that are created.
- The last unnumbered row is a blank row that was created when the breaks were inserted.

To modify the report to show only summary information, you will need to copy the table data row (2) into the *Fund* break footer (3) and then fold the data at the break level. By doing so, all amounts will be summed up on one line verses multiple lines with multiple amounts. Summary level information for data at the *Fund* level will be shown and the detail may be hidden.

7) Copy the **data row (2)** in the table to the ***Fund*** **"break footer" (3)**.

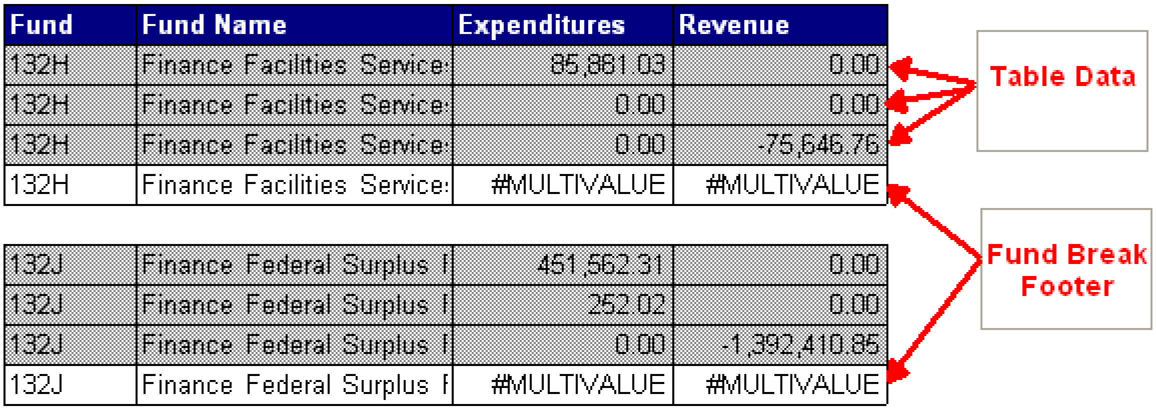
8) Apply grey shading to the **data row (2)** so the difference between the data row (2) and the break footer row (3) are easily displayed.

In the image below, the grey shaded area is the data row (2) in your table. The line under the grey area is what we *copied* and *pasted* into the *Fund* break footer (3).



=NameOf	=NameOf(<Fund Name>	=NameOf(<Expe	=NameOf(<Reve
=<Fund>	=<Fund Name>	=<Expenditures>	=<Revenue>
=<Fund>	=<Fund Name>	=<Expenditures>	=<Revenue>

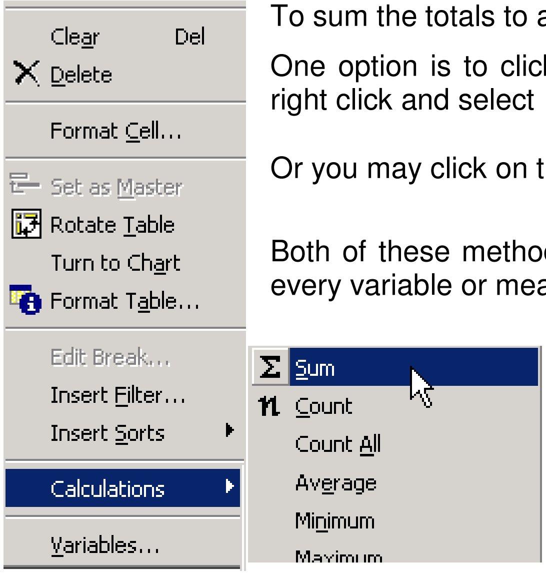
If you go back to the *Results View* instead of looking at the *Structure View* you will see the grey area represents all the data that will make up the *Total* for the specific *Fund, Function Group, Type* and *Object Type* when we *Sum()* the data in the break footer (3) where we copied our data to.



Fund	Fund Name	Expenditures	Revenue
132H	Finance Facilities Service	85,881.03	0.00
132H	Finance Facilities Service	0.00	0.00
132H	Finance Facilities Service	0.00	-75,646.76
132H	Finance Facilities Service	#MULTIVALUE	#MULTIVALUE
132J	Finance Federal Surplus I	451,562.31	0.00
132J	Finance Federal Surplus I	252.02	0.00
132J	Finance Federal Surplus I	0.00	-1,392,410.85
132J	Finance Federal Surplus I	#MULTIVALUE	#MULTIVALUE

You will notice that in the break footer there is now an error. ***#MULTIVALUE*** means that Desktop Intelligence is trying to display all values for that object in one cell. Because this is a footer cell, there is no way all the values will be displayed. Only one value may be shown. To fix this problem, you may use *Functions* like *Min(), Max(), Sum(),* etc. Since our goal is to sum up all the *Expenditures* and *Revenue* by *Fund,* the *Sum() Function* may be used.

Totals in Breaks


Clear
Del
Delete
Format Cell...
Set as Master
Rotate Table
Turn to Chart
Format Table...
Edit Break...
Insert Filter...
Insert Sorts
Calculations
Variables...
Sum
Count
Count All
Average
Minimum
Maximum

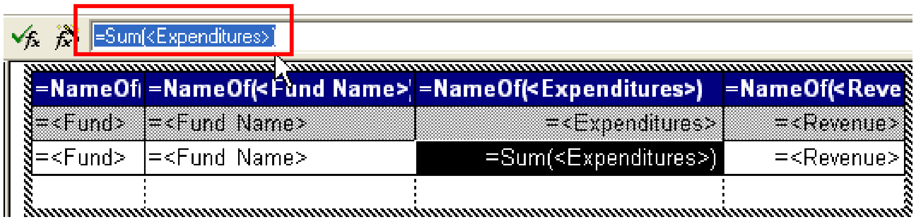
To sum the totals to a break, there are a few options you have to choose from.

One option is to click one of your variables or measure objects in the data row, right click and select ***Calculations and Sum.***

Or you may click on the *Measure Toolbar* icon Σ.

Both of these methods will add totals to a break. You would have to do this for every variable or measure in the report.

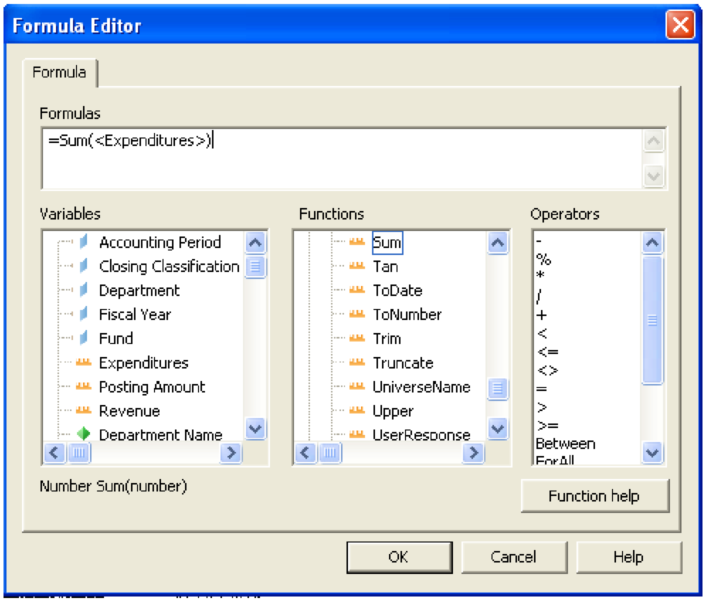
To add *Sum()*, you may also click on the cell and type *Sum()* around each variable in the *Formula Bar.*



=Sum(<Expenditures>)

=NameOf	=NameOf(<Fund Name>	=NameOf(<Expenditures>)	=NameOf(<Reve
=<Fund>	=<Fund Name>	=<Expenditures>	=<Revenue>
=<Fund>	=<Fund Name>	=Sum(<Expenditures>)	=<Revenue>

Or you may add the function using the *Formula Editor,* clicking on the function *Sum()*. Just be sure that the parentheses are around the variable to be summed.


Formula Editor
Formula
Formulas
Variables
Accounting Period
Closing Classification
Department
Fiscal Year
Fund
Expenditures
Posting Amount
Revenue
Department Name
Functions
Sum
Tan
ToDate
ToNumber
Trim
Truncate
UniverseName
Upper
UserResponse
Operators
-
%
*
/
+
<
<=
<>
=
>
>=
Between
ForAll
Function help
OK
Cancel
Help

=Sum(<Expenditures>)

Number Sum(number)

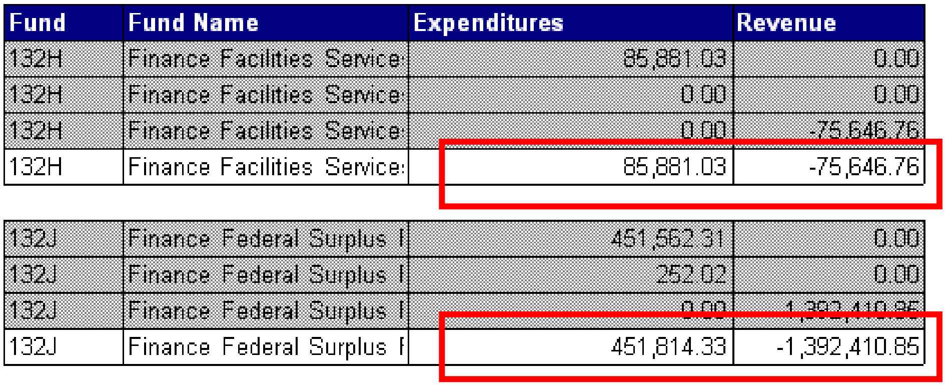
The final result, regardless of the method used, should sum *Expenditures* and *Revenue* in the *Fund* break footer:

Sum(<Expenditures>)

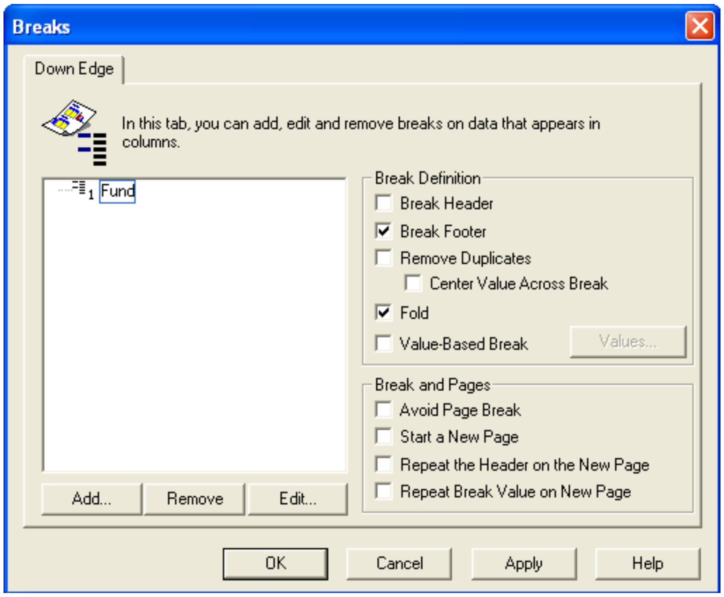
Sum(<Revenue>)

9) Go back to ***Structure View*** and in the break footer that we created for *Fund*, add ***Sum()*** to the variables ***Expenditures*** and ***Revenue***.

When you view the results, you will notice that ***#MULTIVALUE*** disappears and now we see a value.



Fund	Fund Name	Expenditures	Revenue
132H	Finance Facilities Service:	85,881.03	0.00
132H	Finance Facilities Service:	0.00	0.00
132H	Finance Facilities Service:	0.00	-75,646.76
132H	Finance Facilities Service:	85,881.03	-75,646.76
132J	Finance Federal Surplus F	451,562.31	0.00
132J	Finance Federal Surplus F	252.02	0.00
132J	Finance Federal Surplus F	0.00	1,392,410.85
132J	Finance Federal Surplus F	451,814.33	-1,392,410.85



In this tab, you can add, edit and remove breaks on data that appears in columns.

Break Definition
☐ Break Header
☑ Break Footer
☐ Remove Duplicates
☐ Center Value Across Break
☑ Fold
☐ Value-Based Break

Break and Pages
☐ Avoid Page Break
☐ Start a New Page
☐ Repeat the Header on the New Page
☐ Repeat Break Value on New Page

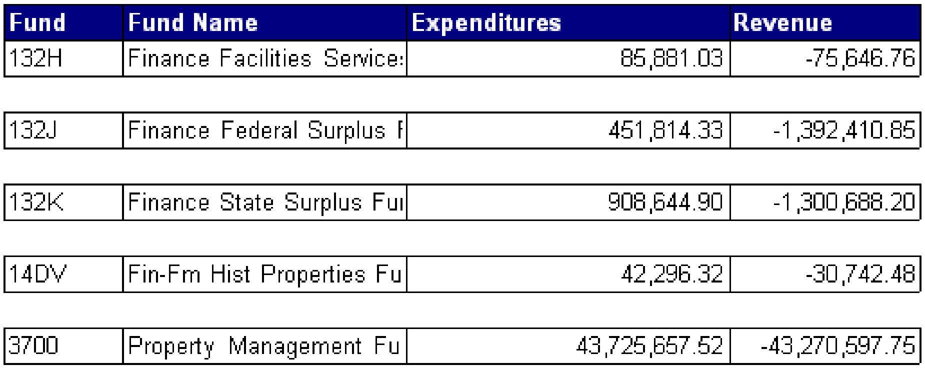
Now that we have fixed the error, we may "fold" the data on the *Fund* break and hide everything but the summed information. This will help to simplify the report and show us only totals for each *Fund*.

10) Click on the table, right click and choose *Format Breaks* from *Format* on the menu bar.

11) Click on ***Fund*** and then select ***Fold*** under the *Break Definition Section.*

12) Click on ***OK*** and view your report.

Your report should now look something like this:



Fund	Fund Name	Expenditures	Revenue
132H	Finance Facilities Service:	85,881.03	-75,646.76
132J	Finance Federal Surplus F	451,814.33	-1,392,410.85
132K	Finance State Surplus Fu	908,644.90	-1,300,688.20
14DV	Fin-Fm Hist Properties Fu	42,296.32	-30,742.48
3700	Property Management Fu	43,725,657.52	-43,270,597.75

13) ***Save*** your report and ***Close*** it.

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Exercise 6: Using Breaks

Review

1) When does a ***#COMPUTATION*** error occur when running a report?

2) What is a break?

3) Why are breaks advantageous?

4) Name the three ways to insert a break.

a)
b)
c)

5) Name the four ways to total breaks.

a)
b)
c)
d)

Hands on Instructions

Task Overview

Use the report created in **Exercise 1 (*Exercise1_ExpRevRpt—Your Name*)** to practice using *Breaks* in a report.

For this exercise, you will modify the query and report built in **Exercise 1** by creating *Breaks* on *Fund* and *Object*. You will also practice folding or hiding data when using *Breaks*.

This report will use prompts but we will retrieve data for *Fiscal Year 2008* and *Accounting Period 6* only.

Procedures

1) Open and log into **Desktop Intelligence**.

2) Open ***Exercise1_ExpRevRpt—Your Name.***

3) ***Save*** your report as ***Exercise6_Breaks—Your Name.***

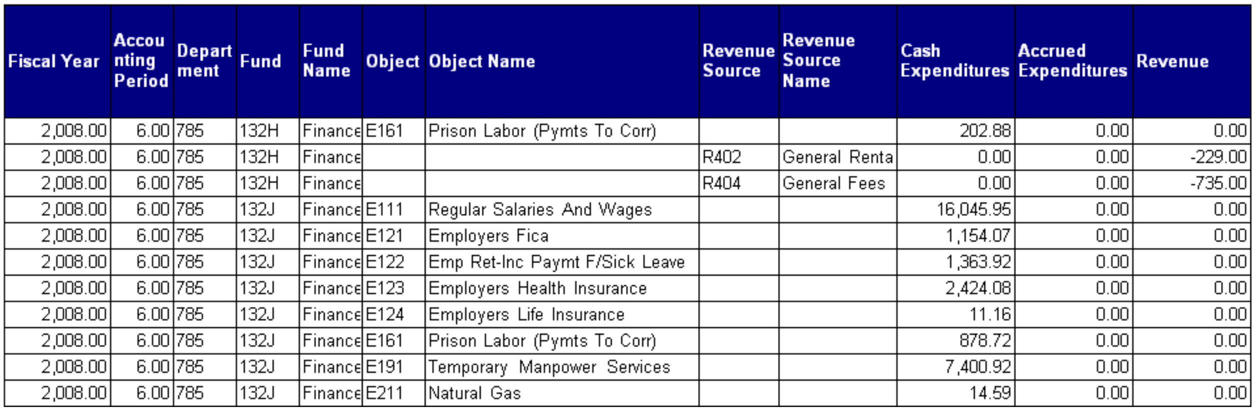
4) Edit the query to include ***Closing Classification****.*

5) Add ***Closing Classification*** to your table and **hide it**.

6) Remove ***Posting Amount*** from the table.

7) Create **3 variables** and **add** the variables to your table – note that they break the "flag" rule:

Accrued Expenditures	**=If <Closing Classification>="11" Then <Posting Amount> Else 0.00**
Cash Expenditures	**=If <Closing Classification>="10" Then <Posting Amount> Else 0.00**
Revenue	**=If (<Closing Classification>="14" or <Closing Classification>="15") Then <Posting Amount> Else 0.00**



Fiscal Year	Accounting Period	Department	Fund	Fund Name	Object	Object Name	Revenue Source	Revenue Source Name	Cash Expenditures	Accrued Expenditures	Revenue
2,008.00	6.00	785	132H	Finance	E161	Prison Labor (Pymts To Corr)			202.88	0.00	0.00
2,008.00	6.00	785	132H	Finance			R402	General Renta	0.00	0.00	-229.00
2,008.00	6.00	785	132H	Finance			R404	General Fees	0.00	0.00	-735.00
2,008.00	6.00	785	132J	Finance	E111	Regular Salaries And Wages			16,045.95	0.00	0.00
2,008.00	6.00	785	132J	Finance	E121	Employers Fica			1,154.07	0.00	0.00
2,008.00	6.00	785	132J	Finance	E122	Emp Ret-Inc Paymt F/Sick Leave			1,363.92	0.00	0.00
2,008.00	6.00	785	132J	Finance	E123	Employers Health Insurance			2,424.08	0.00	0.00
2,008.00	6.00	785	132J	Finance	E124	Employers Life Insurance			11.16	0.00	0.00
2,008.00	6.00	785	132J	Finance	E161	Prison Labor (Pymts To Corr)			878.72	0.00	0.00
2,008.00	6.00	785	132J	Finance	E191	Temporary Manpower Services			7,400.92	0.00	0.00
2,008.00	6.00	785	132J	Finance	E211	Natural Gas			14.59	0.00	0.00

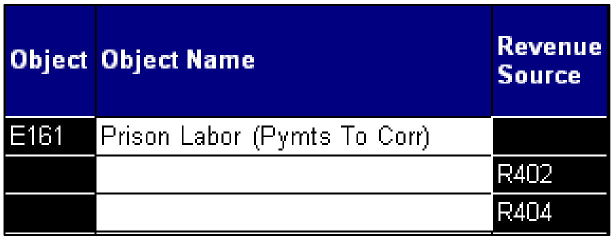
8) ***Save*** your report.

9) Remove ***Fiscal Year***, ***Accounting Period***, ***Department****,* and ***Department Name*** from the report.

10) Insert a ***Break*** on ***Fund.***

At this point, you could leave your report breaking on only *Fund*, but because the report shows *Expenditures* and *Revenues*, two *Closing Classifications* could exist for each *Object* or *Revenue*. In that case, you may insert a break on *Object* and *Revenue Source* to sum the information on one line.

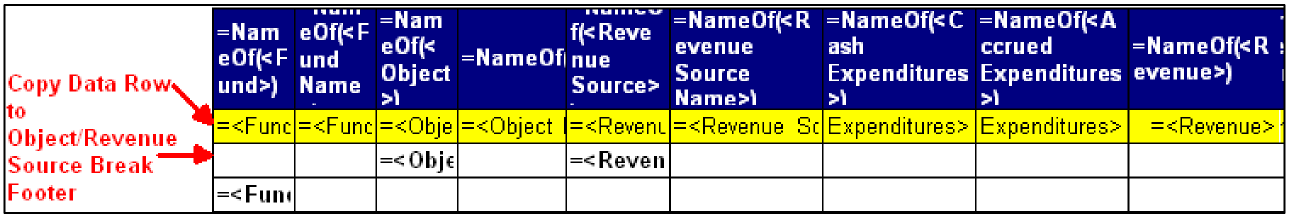
11) Insert a ***Break*** on ***Object*** and ***Revenue Source***. By doing so, you will have one *Break Footer* for both *Dimension Objects* instead of two.
    a) Hold your ***CTRL*** **key** down and click on ***Object*** and ***Revenue Source***, making sure they are both highlighted.
    b) Insert ***Break***.



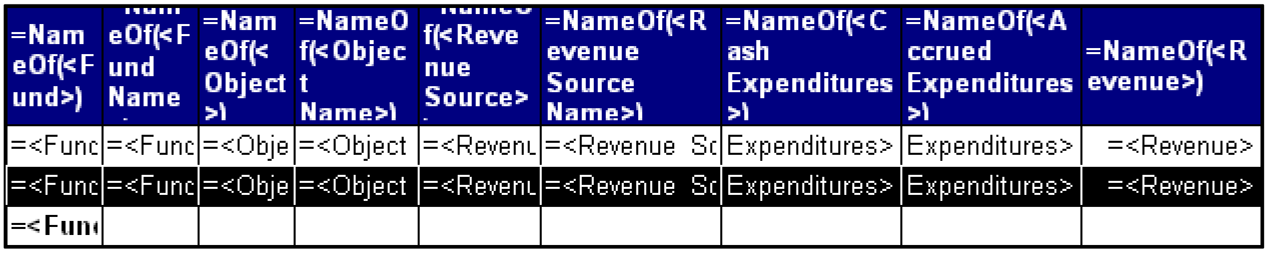
Object	Object Name	Revenue Source
E161	Prison Labor (Pymts To Corr)	
		R402
		R404

12) Uncheck ***Remove Duplicates*** for both breaks.

13) In ***Structure View***, copy the ***Table Data Row*** to the ***Object/Revenue Source Break Footer.***

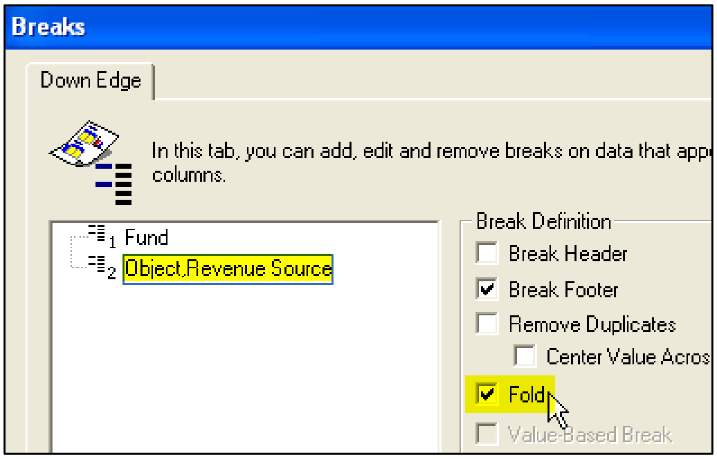

Copy Data Row to Object/Revenue Source Break Footer

=Nam eOf(<F und>)	eOf(<F und Name	=Nam eOf(< Object >)	=NameOf(	f(<Reve nue Source>	=NameOf(<R evenue Source Name>)	=NameOf(<C ash Expenditures >)	=NameOf(<A ccrued Expenditures >)	=NameOf(<R evenue>)
=<Func	=<Func	=<Obje	=<Object	=<Revenu	=<Revenue Sc	Expenditures>	Expenditures>	=<Revenue>
		=<Obje		=<Reven				
=<Fun								



=Nam eOf(<F und>)	eOf(<F und Name	=Nam eOf(< Object >)	=NameO f(<Objec t Name>)	f(<Reve nue Source>	=NameOf(<R evenue Source Name>)	=NameOf(<C ash Expenditures >)	=NameOf(<A ccrued Expenditures >)	=NameOf(<R evenue>)
=<Func	=<Func	=<Obje	=<Object	=<Revenu	=<Revenue Sc	Expenditures>	Expenditures>	=<Revenue>
=<Func	=<Func	=<Obje	=<Object	=<Revenu	=<Revenue Sc	Expenditures>	Expenditures>	=<Revenue>
=<Fun								

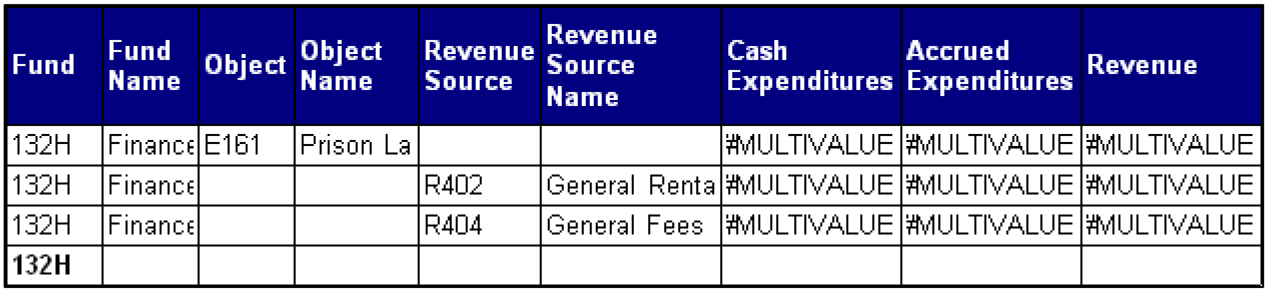
14) Select ***Fold*** under the *Break Definition* of the ***Object,Revenue Source Break***. This will hide everything but summarized data for *Object,Revenue Source*, which will now be shown on one line.



In this tab, you can add, edit and remove breaks on data that app columns.

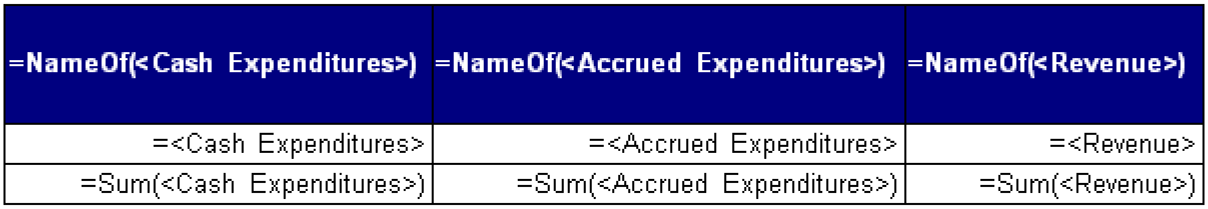
Break Definition
☐ Break Header
☑ Break Footer
☐ Remove Duplicates
☐ Center Value Acros
☑ Fold
☐ Value-Based Break

View your report. Notice that ***#MULTIVALUE*** is shown where totals should be shown.

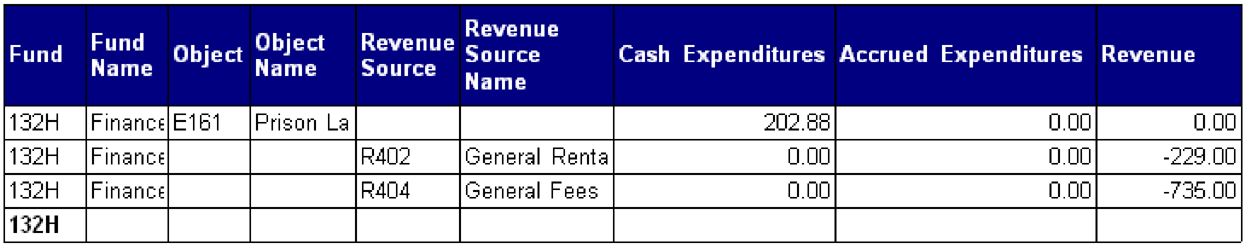


Fund	Fund Name	Object	Object Name	Revenue Source	Revenue Source Name	Cash Expenditures	Accrued Expenditures	Revenue
132H	Finance	E161	Prison La			#MULTIVALUE	#MULTIVALUE	#MULTIVALUE
132H	Finance			R402	General Renta	#MULTIVALUE	#MULTIVALUE	#MULTIVALUE
132H	Finance			R404	General Fees	#MULTIVALUE	#MULTIVALUE	#MULTIVALUE
132H								

15) Correct the ***#MULTIVALUE*** error by inserting ***Sum()*** function around the variables ***Cash Expenditures***, ***Accrued Expenditures***, and ***Revenue*** in the break footer.



=NameOf(<Cash Expenditures>)	=NameOf(<Accrued Expenditures>)	=NameOf(<Revenue>)
=<Cash Expenditures>	=<Accrued Expenditures>	=<Revenue>
=Sum(<Cash Expenditures>)	=Sum(<Accrued Expenditures>)	=Sum(<Revenue>)



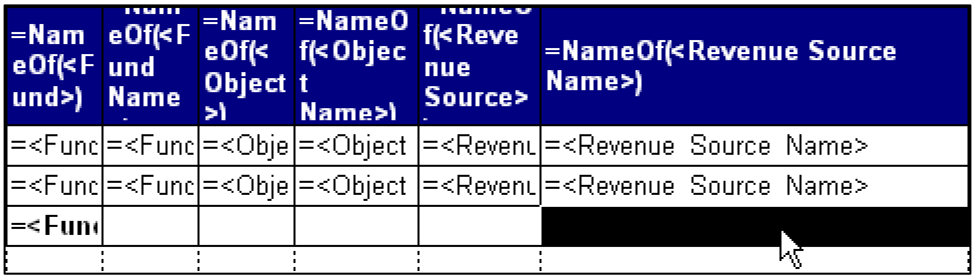
Fund	Fund Name	Object	Object Name	Revenue Source	Revenue Source Name	Cash Expenditures	Accrued Expenditures	Revenue
132H	Finance	E161	Prison La			202.88	0.00	0.00
132H	Finance			R402	General Renta	0.00	0.00	-229.00
132H	Finance			R404	General Fees	0.00	0.00	-735.00
132H								

16) Insert a ***Sum()*** for each variable in the ***Fund Break Footer****.*

We can also create a formula in the *Fund Break Footer* that will say **"Grand Total for Fund "** and the *Fund* we are totaling will be shown. For example, on the grand total line for *132H* you would see, *Grand Total for Fund 132H* and on the grand total line for *132J* you would see *Grand Total for Fund 132J*, etc.

17) Expand the ***Revenue Source Name*** column to make room for the text we will create in our formula.

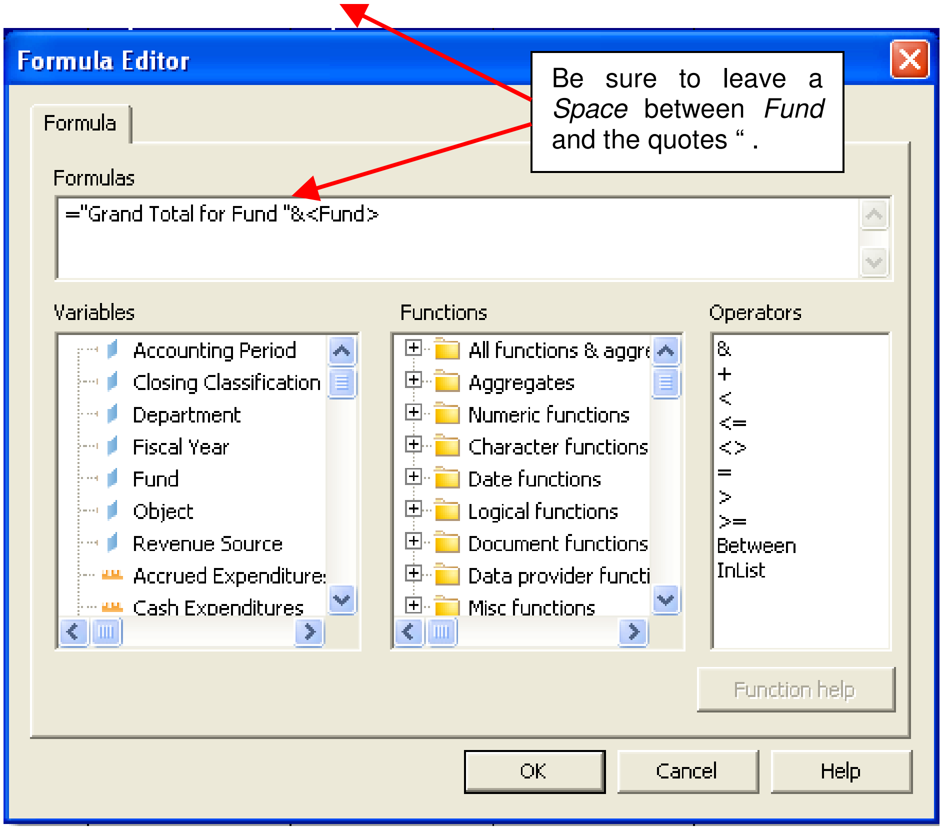
18) In ***Structure View***, click in the ***Revenue Source Name*** field.



=NameOf(<Fund>)	eOf(<Fund Name	=NameOf(<Object>)	=NameOf(<Object Name>)	f(<Revenue Source>	=NameOf(<Revenue Source Name>)
=<Func	=<Func	=<Obje	=<Object	=<Revenu	=<Revenue Source Name>
=<Func	=<Func	=<Obje	=<Object	=<Revenu	=<Revenue Source Name>
=<Fun					

19) Bring up the ***Formula Editor*** and enter the following formula:

="Grand Total for Fund "&<Fund>



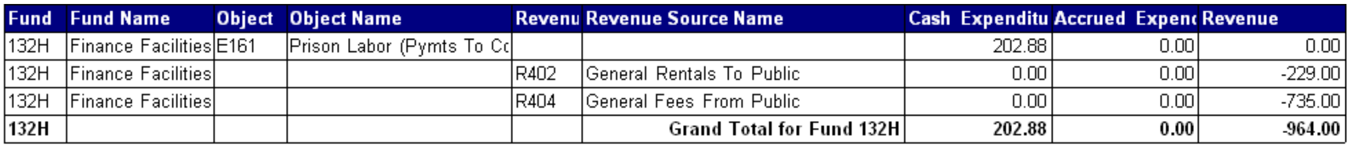
Formula Editor
Formula
Formulas
Variables
Accounting Period
Closing Classification
Department
Fiscal Year
Fund
Object
Revenue Source
Accrued Expenditure
Cash Expenditures
Functions
All functions & aggre
Aggregates
Numeric functions
Character functions
Date functions
Logical functions
Document functions
Data provider functi
Misc functions
Operators
&
+
<
<=
<>
=
>
>=
Between
InList
Function help
OK
Cancel
Help

="Grand Total for Fund "&<Fund>

Be sure to leave a *Space* between *Fund* and the quotes " .

20) ***Save*** your report.

21) ***Close*** your report.



Fund	Fund Name	Object	Object Name	Revenu	Revenue Source Name	Cash Expenditu	Accrued Expen	Revenue
132H	Finance Facilities	E161	Prison Labor (Pymts To C			202.88	0.00	0.00
132H	Finance Facilities			R402	General Rentals To Public	0.00	0.00	-229.00
132H	Finance Facilities			R404	General Fees From Public	0.00	0.00	-735.00
132H					**Grand Total for Fund 132H**	**202.88**	**0.00**	**-964.00**

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Chapter 11: Joining Multiple Data Providers

Linking Data Providers

Linking data providers enables data from different *Data Providers* to be computed in the same table. To demonstrate joining universes, we will build a *Daily Allotment Report*. This report will use the *General Accounting Universe* to bring in *Expenditures* and *Encumbrances* and the *Budget Execution – KY Universe* to bring in *Allotments*.

1) Click on ***File > New*** on the menu bar to start a new report.

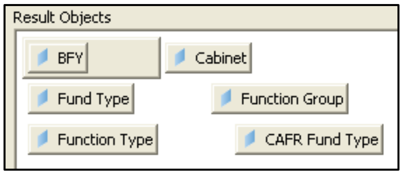
2) Select ***General Accounting Universe*** in the *New Report Wizard.*

There are basically two ways to link *Dimension Objects* from different *Data Providers.* One way is to completely build each query in each *Data Provider* and then manually link or join objects in the *Data Manager*. The other way is to build one query with only *Dimension Objects* in the *Result Objects Panel*, *Save and Close* the query and then build additional *Data Providers* using the "*use an existing query to build a new one"* option in the *New Data Wizard*.

NOTE: Only *Dimension Objects* may be joined from multiple *Data Providers*. *Detail* or *Measure Objects* can not be joined.

Either approach is perfectly acceptable; however, the simplest method is the second option, use one query as the basis for other queries. That is the option we will use to build our queries and join them.

3) Drag the following ***Dimension Objects*** into the ***Result Objects Panel***:



Budget Fiscal Year > ***BFY***

COA-Organization > Organization – Centralized view > ***Cabinet***

COA-Fund Accounting > Fund > Fund hierarchy >***Fund Type***

COA-Detailed Accounting > Function > Function hierarchy > ***Function Group***

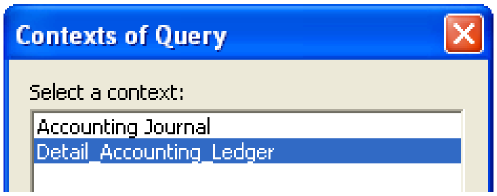
COA-Detailed Accounting > Function > Function hierarchy > ***Function Type***

COA-Fund Accounting > Fund > CAFR Fund > ***CAFR Fund Type***

The objects in the *Result Objects Panel* are objects that will be used in the *Budget Execution – KY* query. Once we join the two universes, we will have to edit each query again to bring in additional objects that can't be joined and set up our conditions.

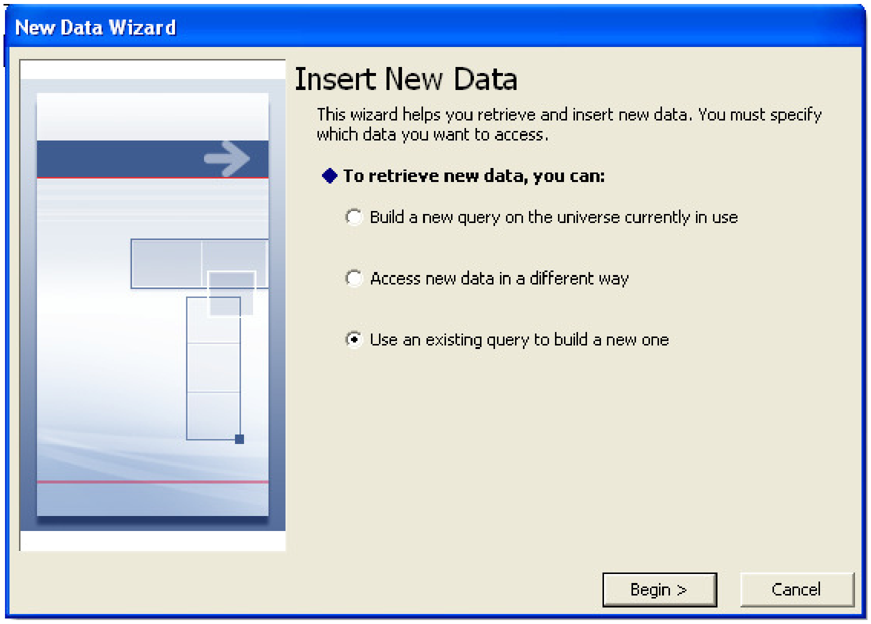
4) ***Save and Close*** the query.

5) If a ***Contexts of Query*** box appears, select ***Detail_Accounting_Ledger***, as the ledger is smaller than the journal. Because of the way joins are set up behind the scenes in the universe, if the query is unsure where to pull information, you will get this message box and have to tell it where to pull the information.



6) Click on ***Data > New Data Provider*** on the menu bar to build a new query.

7) Select "***Use an existing query to build a new one***"



New Data Wizard

Insert New Data

This wizard helps you retrieve and insert new data. You must specify which data you want to access.

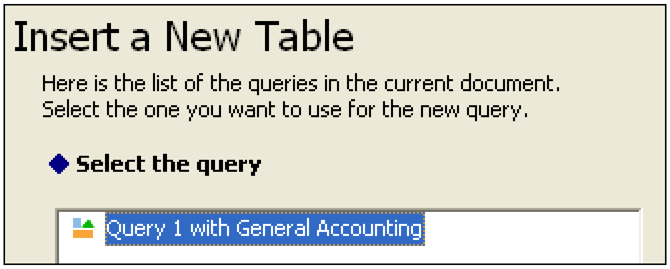
◆ **To retrieve new data, you can:**

○ Build a new query on the universe currently in use

○ Access new data in a different way

● Use an existing query to build a new one

8) Select "***Query 1 with General Accounting***"



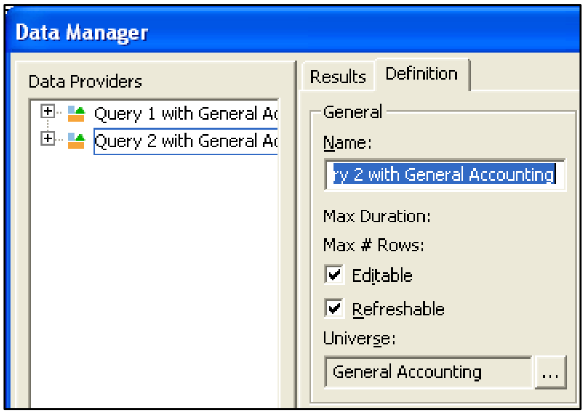
Insert a New Table

Here is the list of the queries in the current document.
Select the one you want to use for the new query.

◆ **Select the query**

Query 1 with General Accounting

9) When the new query comes up, click ***Save and Close*** and select ***Detail_Accounting_Ledger*** as the context.



Data Manager

Data Providers

Query 1 with General Ac
Query 2 with General Ac

General

Name: ry 2 with General Accounting

Max Duration:

Max # Rows:

☑ Editable

☑ Refreshable

Universe: General Accounting

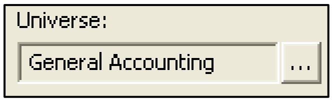
10) Open the ***Data Manager*** .

11) Click on "***Query 2 with General Accounting***".

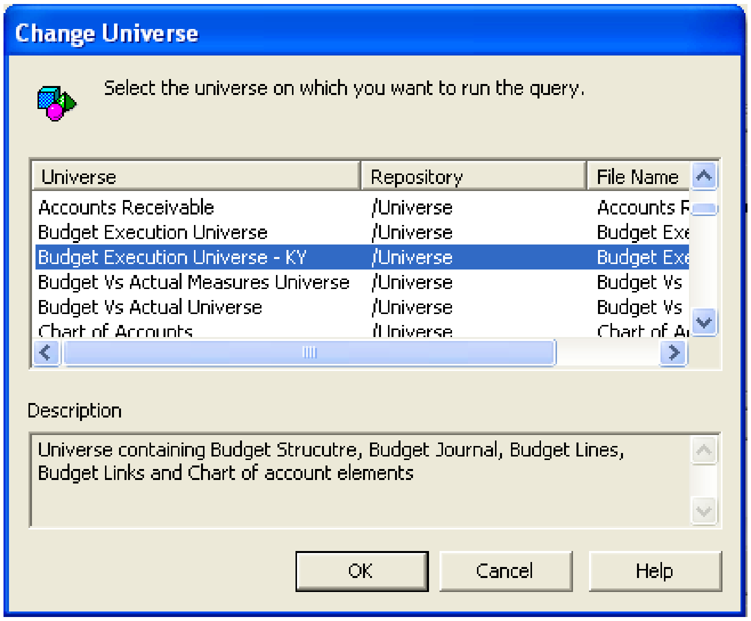
12) Click on the ***Definition*** tab.

The second query must query against the *Budget Execution Universe-KY*.

13) To change the universe, click on the **"…"** icon next to ***General Accounting*** in the ***Universe:*** section of the ***Definition*** tab.


Universe:
General Accounting
...

14) Select ***Budget Execution Universe-KY*** and click on ***OK***.


Change Universe

Select the universe on which you want to run the query.

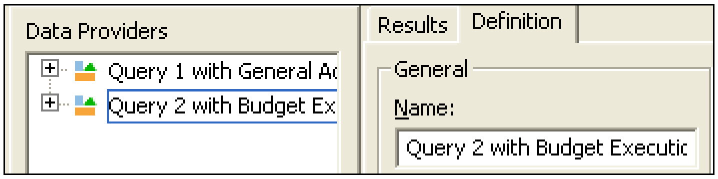
Universe	Repository	File Name
Accounts Receivable	/Universe	Accounts F
Budget Execution Universe	/Universe	Budget Exe
Budget Execution Universe - KY	/Universe	Budget Exe
Budget Vs Actual Measures Universe	/Universe	Budget Vs
Budget Vs Actual Universe	/Universe	Budget Vs
Chart of Accounts	/Universe	Chart of A

Description

Universe containing Budget Strucutre, Budget Journal, Budget Lines, Budget Links and Chart of account elements

OK
Cancel
Help

The second query will be changed to "*Query 2 with Budget Execution Universe – KY*".


Data Providers
Query 1 with General Ac
Query 2 with Budget Ex
Results
Definition
General

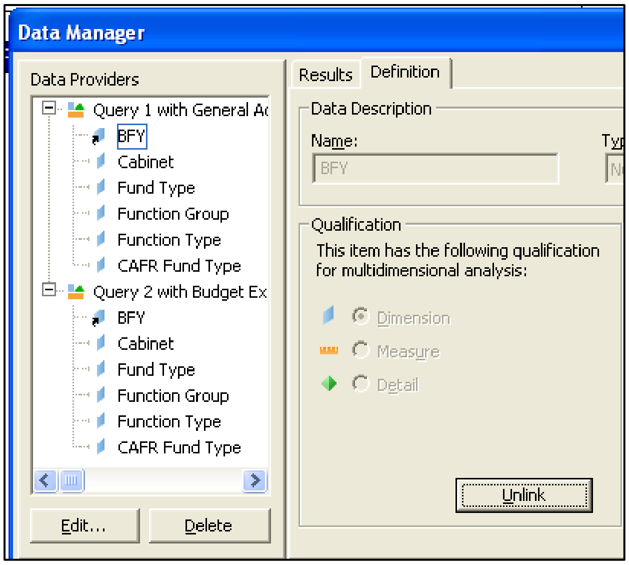
Name: Query 2 with Budget Executic

Notice when you click on an object under the data providers that each object has been linked ↗.

If they were not linked, or joined, the arrow would not exist when you click on the object, and the *Link/Unlink* button in the *Qualification* section would say "*Link*".

This is where you would actually link any objects that need to be joined that are not. There will be two more objects added that will need to be joined, so we will have an opportunity later to do this manually.

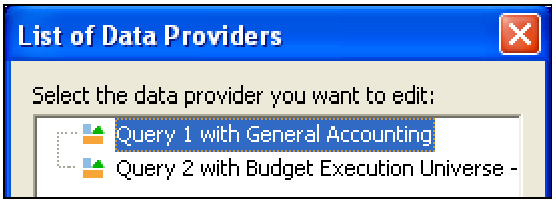
15) Click **OK**.


Data Manager
Data Providers
Query 1 with General Ac
BFY
Cabinet
Fund Type
Function Group
Function Type
CAFR Fund Type
Query 2 with Budget Ex
BFY
Cabinet
Fund Type
Function Group
Function Type
CAFR Fund Type
Edit...
Delete
Results
Definition
Data Description
Typ
Qualification
Dimension
Measure
Detail
Unlink

Name: BFY

This item has the following qualification for multidimensional analysis:

16) Click on ***Edit Data Provider*** and select "***Query 1 with General Accounting***" so that additional objects can be added and conditions may be set up.



List of Data Providers

Select the data provider you want to edit:

Query 1 with General Accounting

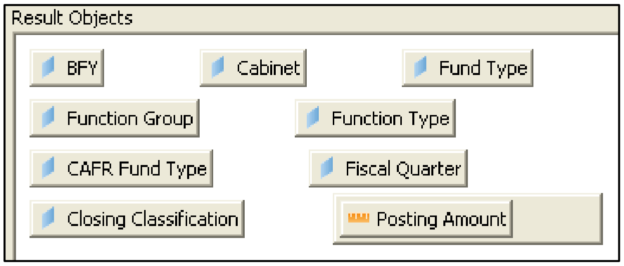
Query 2 with Budget Execution Universe -

17) Add the following to the ***Result Objects*** panel from the ***General Accounting Universe***:

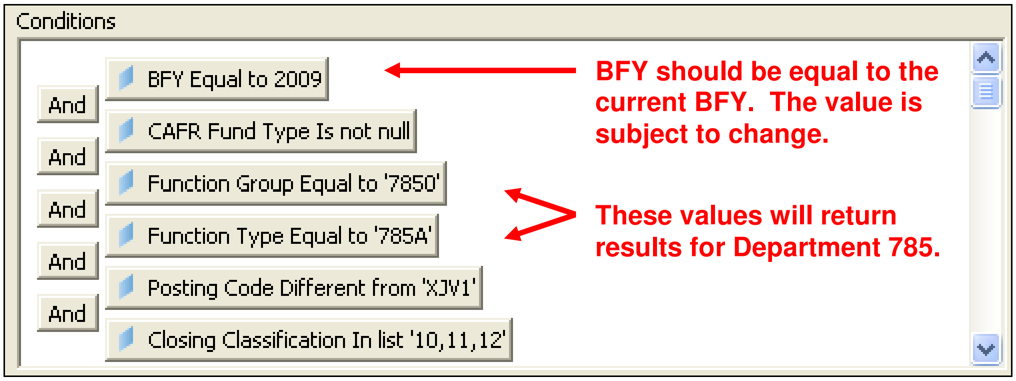
Accounting Period > *Fiscal Quarter*

Posting Code > *Closing Classification*

Detailed Accounting Ledger > *Posting Amount*



18) Add the following conditions to the *Conditions Panel* in the *General Accounting Universe:*



Conditions

BFY Equal to 2009

And CAFR Fund Type Is not null

And Function Group Equal to '7850'

And Function Type Equal to '785A'

And Posting Code Different from 'XJV1'

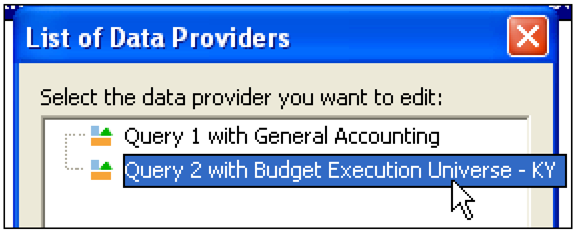
And Closing Classification In list '10,11,12'

BFY should be equal to the current BFY. The value is subject to change.

These values will return results for Department 785.

19) ***Save and Close*** the query, **do not run it**.

20) Click on ***Edit Data Provider*** and select "***Query 2 with Budget Execution Universe – KY***" so that additional objects can be added and conditions may be set up.



List of Data Providers

Select the data provider you want to edit:

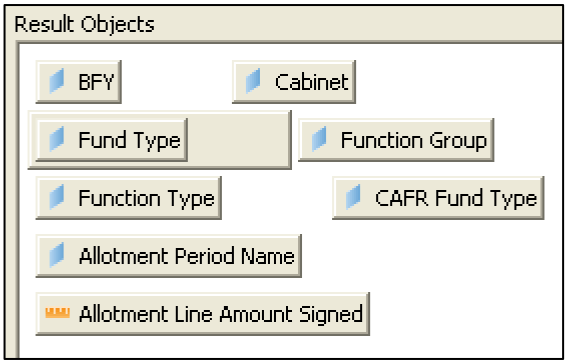
Query 1 with General Accounting

Query 2 with Budget Execution Universe - KY

21) Add the following to the ***Result Objects Panel*** in the ***Budget Execution –KY Universe***:

Budget Structure > Allotment Option > ***Allotment Period Name***

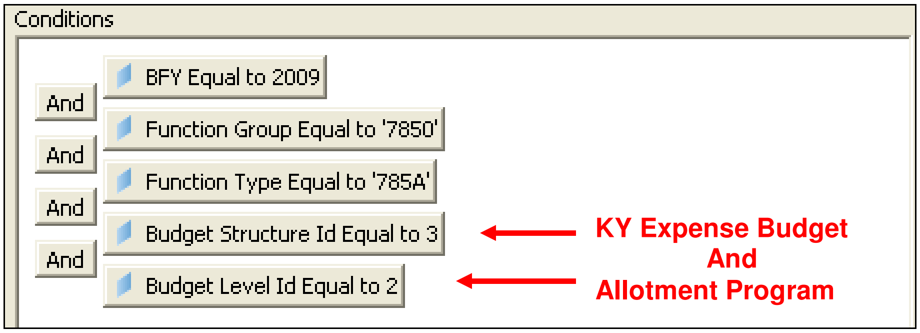
Budgeting Journal > Allotment Information > ***Allotment Line Amount Signed***



Result Objects

BFY
Cabinet
Fund Type
Function Group
Function Type
CAFR Fund Type
Allotment Period Name
Allotment Line Amount Signed

22) Add the following conditions to the ***Conditions Panel*** in the ***Budget Execution –KY Universe***:



Conditions

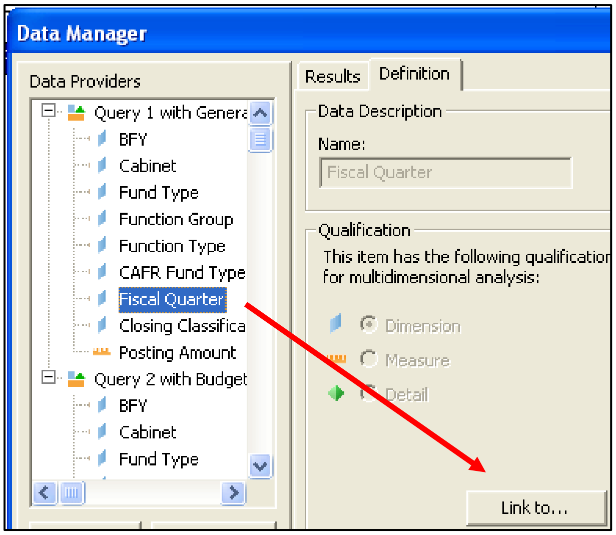
BFY Equal to 2009
And
Function Group Equal to '7850'
And
Function Type Equal to '785A'
And
Budget Structure Id Equal to 3
And
Budget Level Id Equal to 2

KY Expense Budget
And
Allotment Program

23) ***Save and Close*** the query, **do not run it**.

24) Open the ***Data Manager*** and note that ***Fiscal Quarter*** under ***Query 1 with General Accounting*** is not linked to anything.

25) Because allotments are set up based on *Allotment Periods* we have to use ***Fiscal Quarter*** in order to have a meaningful join. We may join ***Fiscal Quarter*** **to** ***Allotment Period Name*** by clicking on ***Fiscal Quarter***, then click on "***Link to…***" and select ***Allotment Period Name***.



Data Manager

Data Providers

Query 1 with Genera
BFY
Cabinet
Fund Type
Function Group
Function Type
CAFR Fund Type
Fiscal Quarter
Closing Classifica
Posting Amount
Query 2 with Budget
BFY
Cabinet
Fund Type

Results | Definition

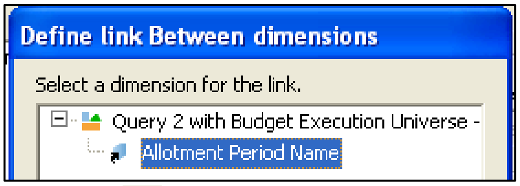
Data Description

Name: Fiscal Quarter

Qualification

This item has the following qualificatior for multidimensional analysis:

● Dimension
○ Measure
○ Detail



Define link Between dimensions

Select a dimension for the link.

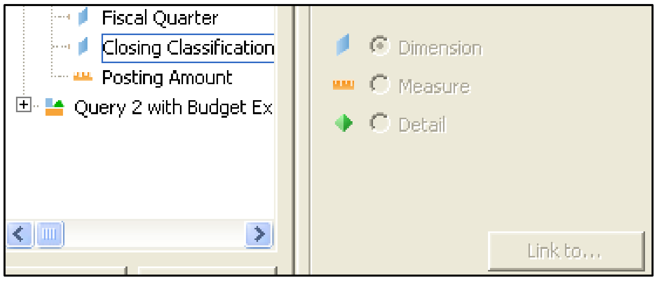
Query 2 with Budget Execution Universe -
Allotment Period Name

26) ***Refresh*** the query.

Incompatible Objects

Unlinked *Dimension Objects* from different *Data Providers* are called *Incompatible Objects*, meaning they can not appear in the table at the same time. You may include unlinked *Dimension Objects* from only one *Data Provider* in the table. Notice that in your query from the *General Accounting Universe*, *Closing Classification* is left unlinked to any other *Dimension Object*.

NOTE: Desktop Intelligence will only allow you to have ONE *Dimension Object* in your report (table) that is not linked. If there was another *Dimension Object* besides *Closing Classification* that would not be joined to the *BE-KY* universe, you would not be allowed to use both objects in your report.



In a table you are allowed to have:

- Linked *Dimension Objects* from one or both *Data Providers*
- Unlinked *Dimension Objects* from one *Data Provider*
- *Detail Objects* from one or both *Data Providers* if the *Detail Object* is associated with a linked *Dimension Object*
- *Measure Objects* from one or both *Data Providers*.

In the rules above, it states that "*Detail Objects* from one or both *Data Providers* if the *Detail Object* is associated with a linked *Dimension Object".* There is a work around associated with that statement that may be used to bypass the limitation set by Desktop Intelligence on the number of unlinked *Dimension Objects* allowed in a table. If you have multiple *Dimension Objects* from *Data Providers* that are not available in each *Data Provider(s)* in your report, you may create a variable that is equal to the unlinked *Dimension Object* and make that variable a *Detail Object* that is associated with a linked *Dimension Object* from the same *Data Provider*.

For steps 26 through 34, you do not need to follow along with the instructor. An opportunity to practice this method will be given in the next exercise.

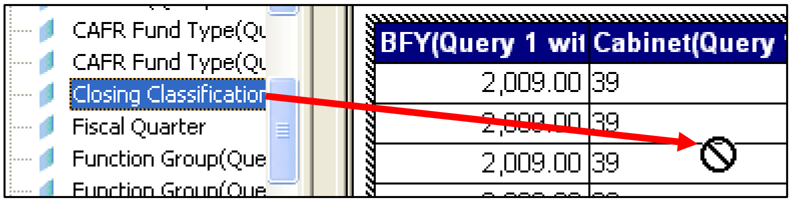
If we added *Object* to the *Budget Execution Universe – KY* query and then added those objects to the table, *Closing Classification* could not be added to the table.

27) Edit the ***Budget Execution Universe – KY*** query and add ***Object*** to the ***Result Objects Panel.***

28) ***Run*** the query.

29) If ***Closing Classification*** is on the table, **remove it** and **add *Object.*** Else just **add *Object*** to the table.

30) Attempt to drag ***Closing Classification*** onto the table. Notice that Desktop Intelligence will not allow you to add it to the table.



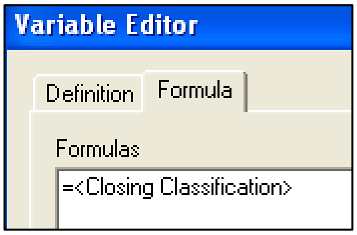
BFY(Query 1 wit	Cabinet(Query
2,009.00	39
2,009.00	39
2,009.00	39

In order to include *Closing Classification* in the table along with an unlinked *Dimension Object* from *Budget Execution – KY Universe*, we would have to create a *Detail* variable equal to *Closing Classification* and associate it with a *Dimension Object* from the *General Accounting Universe.* In this case, we could associate *Closing Classification* with *Fund Type* since *Fund Type* is driving the report.

31) Create a **variable** named ***CC*** to represent ***Closing Classification***.

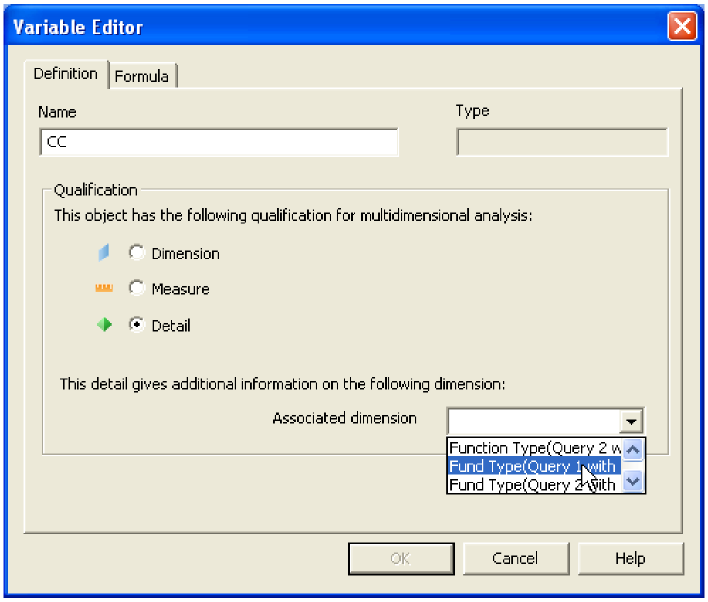
32) In the drop down box next to ***Associated Dimension***, select ***Fund Type (Query 1 with GA)***.

33) The formula should be ***=<Closing Classification>***


Variable Editor
Definition
Formula

Formulas

=<Closing Classification>


Variable Editor
Definition
Formula

Name: CC

Type:

Qualification

This object has the following qualification for multidimensional analysis:

○ Dimension

○ Measure

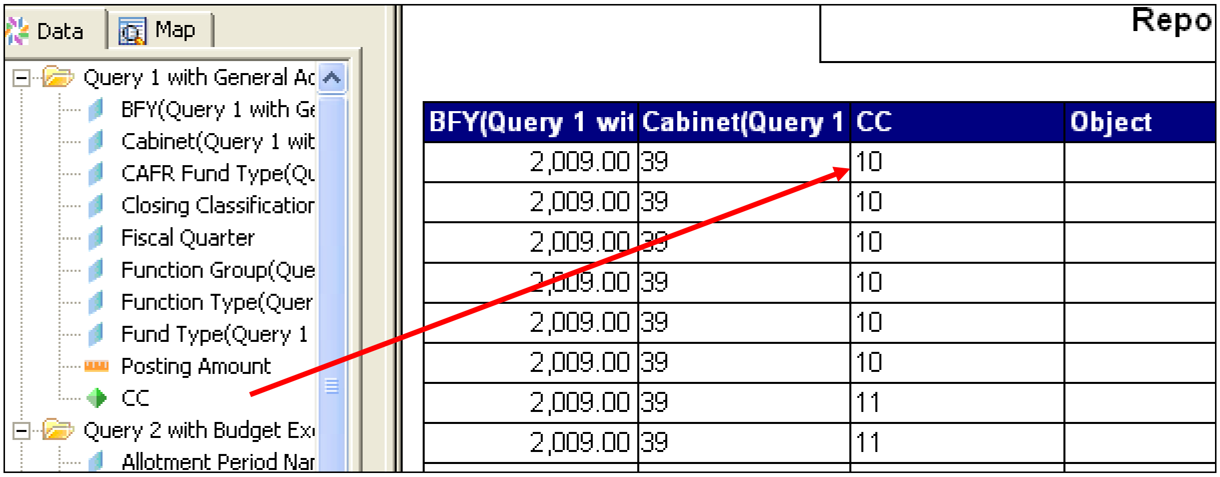
● Detail

This detail gives additional information on the following dimension:

Associated dimension

Function Type(Query 2 w
Fund Type(Query 1 with
Fund Type(Query 2 with
OK
Cancel
Help

34) Drag the **variable** ***CC*** onto the table. Since the variable is associated with a *Dimension Object* from the same *Universe*, it may be added to the table without having to be joined to an object from another *Data Provider.*


Data
Map
Query 1 with General Ac
BFY(Query 1 with Ge
Cabinet(Query 1 wit
CAFR Fund Type(Qu
Closing Classificatior
Fiscal Quarter
Function Group(Que
Function Type(Quer
Fund Type(Query 1
Posting Amount
CC
Query 2 with Budget Ex
Allotment Period Nar
Repo

BFY(Query 1 wit	Cabinet(Query 1	CC	Object
2,009.00	39	10	
2,009.00	39	10	
2,009.00	39	10	
2,009.00	39	10	
2,009.00	39	10	
2,009.00	39	10	
2,009.00	39	11	
2,009.00	39	11	

At this point, you should resume following along with the instructor.

35) Remove ***BFY***, ***Cabinet***, and ***Fiscal Quarter, CC*** and ***Object*** from the report.

36) Add ***Closing Classification*** to the report, and add ***Allotment Line Amount Signed*** in front of ***Posting Amount***.

37) Create **four variables**, following the “flag” rule:

Expenditures Flag **=If(<Closing Classification>="10" or <Closing Classification>="11") Then “Yes” Else “No”**

Expenditures **=<Posting Amount> Where (<Expenditures Flag> = “Yes”)**

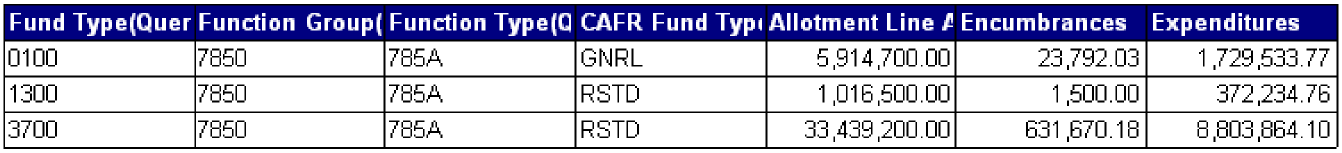
Encumbrances Flag **=If(<Closing Classification>="12") Then “Yes” Else “No”**

Encumbrances **=<Posting Amount> Where (<Encumbrances Flag> = “Yes”)**

38) Delete ***Posting Amount*** from the report and add the ***Encumbrances*** and ***Expenditures*** variables after ***Allotment Line Amount Signed***.

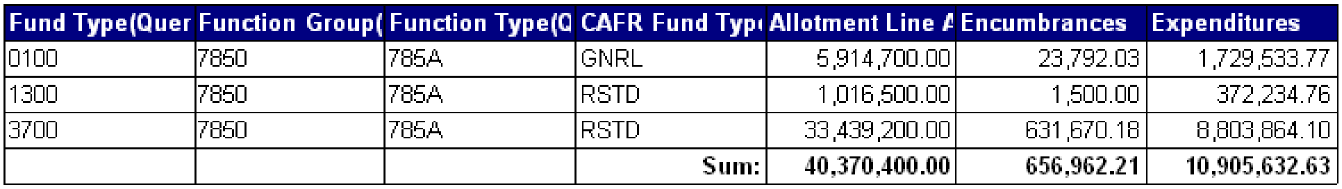
Note that we could hide ***Closing Classification***, insert breaks, and fold the data to obtain a summarized report, but because we followed the “flag” rule, those steps are not necessary. We can see a summarized report simply by removing ***Closing Classification*** from the table.

39) Delete ***Closing Classification*** from the table.



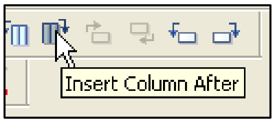
Fund Type(Quer	Function Group(	Function Type(Q	CAFR Fund Typ	Allotment Line A	Encumbrances	Expenditures
0100	7850	785A	GNRL	5,914,700.00	23,792.03	1,729,533.77
1300	7850	785A	RSTD	1,016,500.00	1,500.00	372,234.76
3700	7850	785A	RSTD	33,439,200.00	631,670.18	8,803,864.10

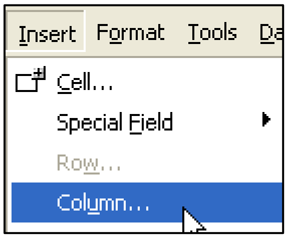
40) Insert **totals** for each *Measure* or *Variable.*

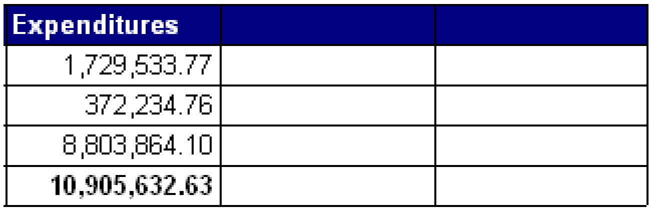


Fund Type(Quer	Function Group(	Function Type(Q	CAFR Fund Typ	Allotment Line A	Encumbrances	Expenditures
0100	7850	785A	GNRL	5,914,700.00	23,792.03	1,729,533.77
1300	7850	785A	RSTD	1,016,500.00	1,500.00	372,234.76
3700	7850	785A	RSTD	33,439,200.00	631,670.18	8,803,864.10
			Sum:	**40,370,400.00**	**656,962.21**	**10,905,632.63**

41) Insert **two columns** next to ***Expenditures*** by highlighting the *Expenditures* column and clicking on ***Insert Column After*** on the ***Structure Toolbar***. Or click on ***Insert > Column*** twice on the menu bar.

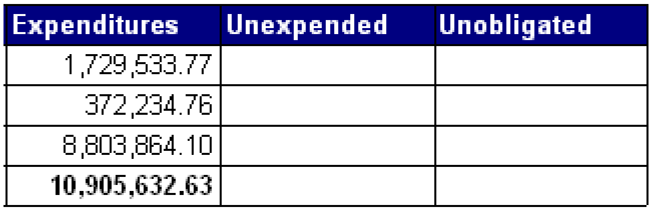






Expenditures		
1,729,533.77		
372,234.76		
8,803,864.10		
10,905,632.63		

42) Name the new columns ***Unexpended*** and ***Unobligated***.

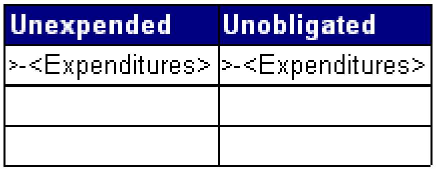


Expenditures	Unexpended	Unobligated
1,729,533.77		
372,234.76		
8,803,864.10		
10,905,632.63		

43) In ***Structure View***, add formulas for ***Unexpended*** and ***Unobligated*** amounts to the **data row**.

Unexpended **=<Allotment Line Amount Signed>-<Expenditures>**

Unobligated **=<Allotment Line Amount Signed>-<Encumbrances>-<Expenditures>**



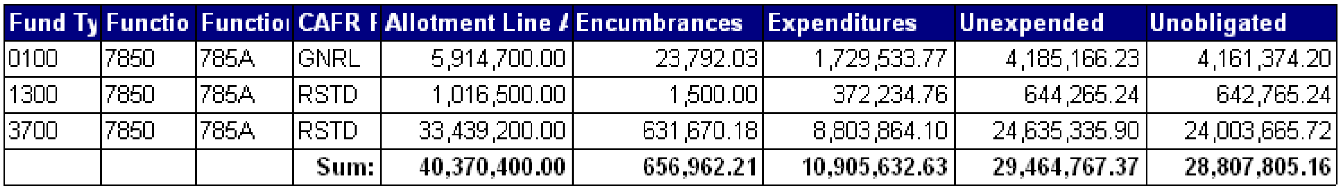
Unexpended	Unobligated
>-<Expenditures>	>-<Expenditures>

44) In ***Structure View,*** add formulas to subtotal ***Unexpended*** and ***Unobligated*** in both the ***Break Footer*** and the ***Grand Total*** line.

Unexpended **=<Allotment Line Amount Signed>-Sum(<Expenditures>)**

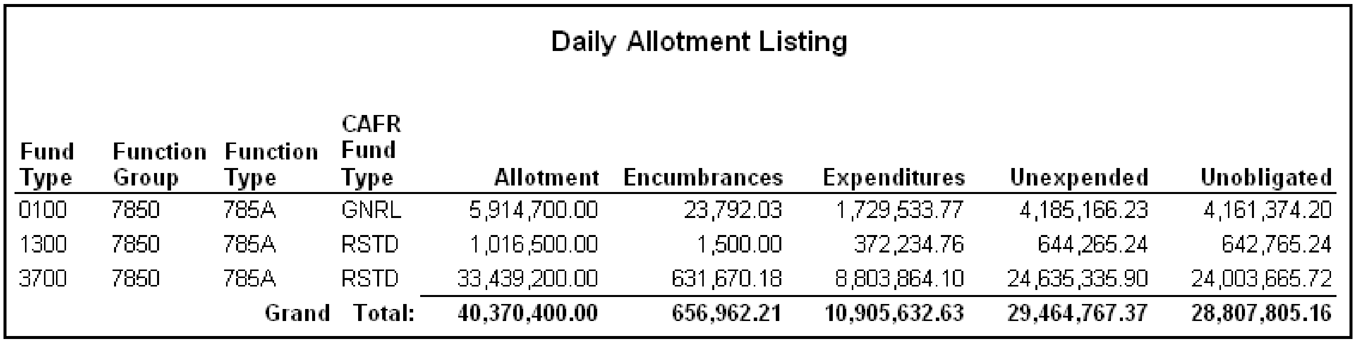
Unobligated **=<Allotment Line Amount Signed>-Sum(<Encumbrances>)-Sum(<Expenditures>)**

Your report should now look similar to this:



Fund Ty	Functio	Functio	CAFR	Allotment Line	Encumbrances	Expenditures	Unexpended	Unobligated
0100	7850	785A	GNRL	5,914,700.00	23,792.03	1,729,533.77	4,185,166.23	4,161,374.20
1300	7850	785A	RSTD	1,016,500.00	1,500.00	372,234.76	644,265.24	642,765.24
3700	7850	785A	RSTD	33,439,200.00	631,670.18	8,803,864.10	24,635,335.90	24,003,665.72
			Sum:	**40,370,400.00**	**656,962.21**	**10,905,632.63**	**29,464,767.37**	**28,807,805.16**

At this point, formatting may be applied that was covered in ***Chapter 5: Simple Formatting****.*



Daily Allotment Listing

Fund Type	Function Group	Function Type	CAFR Fund Type	Allotment	Encumbrances	Expenditures	Unexpended	Unobligated
0100	7850	785A	GNRL	5,914,700.00	23,792.03	1,729,533.77	4,185,166.23	4,161,374.20
1300	7850	785A	RSTD	1,016,500.00	1,500.00	372,234.76	644,265.24	642,765.24
3700	7850	785A	RSTD	33,439,200.00	631,670.18	8,803,864.10	24,635,335.90	24,003,665.72
			Grand Total:	**40,370,400.00**	**656,962.21**	**10,905,632.63**	**29,464,767.37**	**28,807,805.16**

45) ***Save*** your report as ***Chapter11_Joining Multiple Data Providers—Your Name****.*

46) ***Close*** your report.

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Exercise 7: Joining Multiple Data Providers

Review

1) Linking *Data Providers* enables ____.

2) Name two methods of joining *Data Providers.*

a)

b)

3) What does *Context of Query* mean?

4) What are two ways to tell if an object is linked to another object(s)?

a)

b)

5) In a table you may have the following:

a)

b)

c)

d)

6) **True** or **False** Detail Objects must be joined.

Hands on Instructions

Task Overview

Create an *Operating Funds Chart of Accounts* using multiple *Data Providers*.

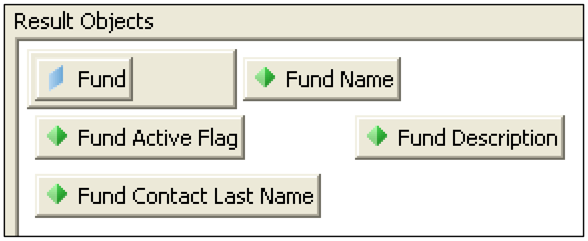
For this exercise, you will create a new report using the *Chart of Accounts Universe* and the *Accounting Template and Profile Universe* to create a report containing three report tabs that show *Operating Chart of Accounts* for *All Funds, Active Funds,* and *Inactive Funds.*

NOTE: In the beginning, the only way to build this type of report was to use the *Kernal Chart of Accounts Universe*, which was frowned upon. As a result, a *Kentucky Specific Universe* was created called *KY-COA* that allows users to build a *Chart of Accounts* report without having to use multiple *Data Providers*. But for training purposes, you will use the *Kernal Chart of Accounts Universe* for this exercise and not the *Kentucky Specific Universe.*

Procedures

1) Open and log in to **Desktop Intelligence.**
2) When the *New Report Wizard* comes up, click ***Generate a Standard Report*.**
3) Click on "***Begin >***".
4) Click ***Universe*** for ***Select the way you want to access data****.*
5) Click "***Next >***".
6) Select the ***Chart of Accounts*** universe**.**
7) Click on "***Finish***".
8) Drag the following objects into the ***Result Objects Panel****:*

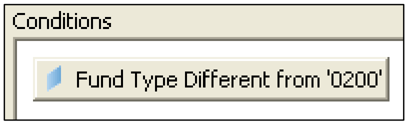
Fund
Fund Name
Fund Active Flag
Fund Description
Fund Contact Last Name


Result Objects
Fund
Fund Name
Fund Active Flag
Fund Description
Fund Contact Last Name

NOTE: *Fund Description* contains the *Accounting Template* set up for the fund that determines where the interest earned on the *Fund's* cash balance will be posted. *Fund Contact Last Name* contains the name of the *Investment Pool* where the cash balance of the *Fund* is invested.

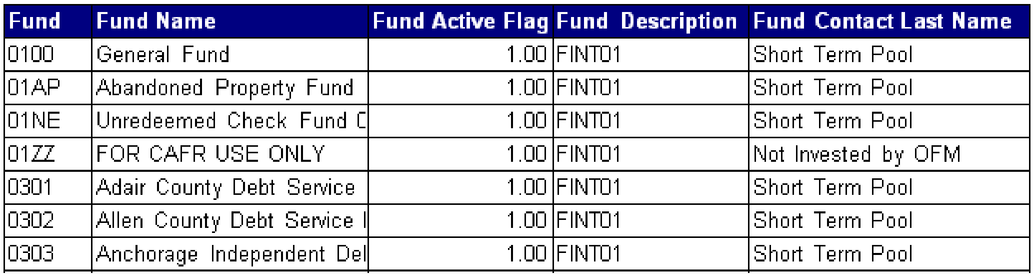
9) To eliminate ***Capital Project Funds****,* create the following condition:

   Fund Type **Different from** "0200"


Conditions
Fund Type Different from '0200'

10) ***Run*** the query.

Your query should return results similar to what is shown below.



Fund	Fund Name	Fund Active Flag	Fund Description	Fund Contact Last Name
0100	General Fund	1.00	FINT01	Short Term Pool
01AP	Abandoned Property Fund	1.00	FINT01	Short Term Pool
01NE	Unredeemed Check Fund C	1.00	FINT01	Short Term Pool
01ZZ	FOR CAFR USE ONLY	1.00	FINT01	Not Invested by OFM
0301	Adair County Debt Service	1.00	FINT01	Short Term Pool
0302	Allen County Debt Service I	1.00	FINT01	Short Term Pool
0303	Anchorage Independent Del	1.00	FINT01	Short Term Pool

11) ***Save*** your report as ***Exercise7_Joining Multiple Data Providers—Your Name*****.**

12) Create the following **variables**:

- **a)** Create a ***Detail Variable*** named ***Active/Inactive Indicator*** that will tell us if the *Fund* is *Active* or *Inactive* instead of only showing a number *1* or *2*.

  = If <Fund Active Flag>=1 Then "Active" Else "Inactive"

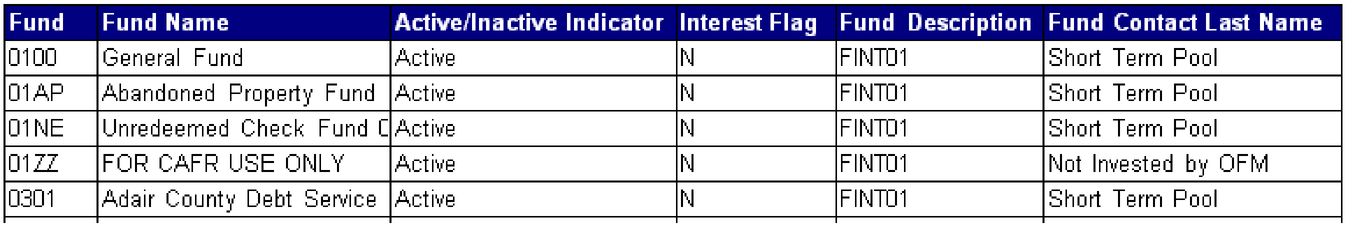
- **b)** Create a ***Detail Variable*** named ***Interest_Flag*** that will tell us if the *Fund* receives its interest income or if interest earned goes to another *Fund* such as *General Fund*, etc.

  = If <Fund Description> InList ("FINT01" ,"FINT02" ,"FINT11") Then "N" Else If <Fund Description>="#EMPTY" Or IsNull(<Fund Description>) Then " " Else "Y"

NOTE: Remember when creating a *Detail* variable be sure to associate the *Detail* with an existing *Dimension Object* from the same *Universe*.

13) Replace the ***Fund Active Flag*** with the variable ***Active/Inactive Indicator.*** Add the ***Interest_Flag*** to the table between the ***Active/Inactive Indicator*** and ***Fund Description.***

You should get results similar to this.



Fund	Fund Name	Active/Inactive Indicator	Interest Flag	Fund Description	Fund Contact Last Name
0100	General Fund	Active	N	FINT01	Short Term Pool
01AP	Abandoned Property Fund	Active	N	FINT01	Short Term Pool
01NE	Unredeemed Check Fund C	Active	N	FINT01	Short Term Pool
01ZZ	FOR CAFR USE ONLY	Active	N	FINT01	Not Invested by OFM
0301	Adair County Debt Service	Active	N	FINT01	Short Term Pool

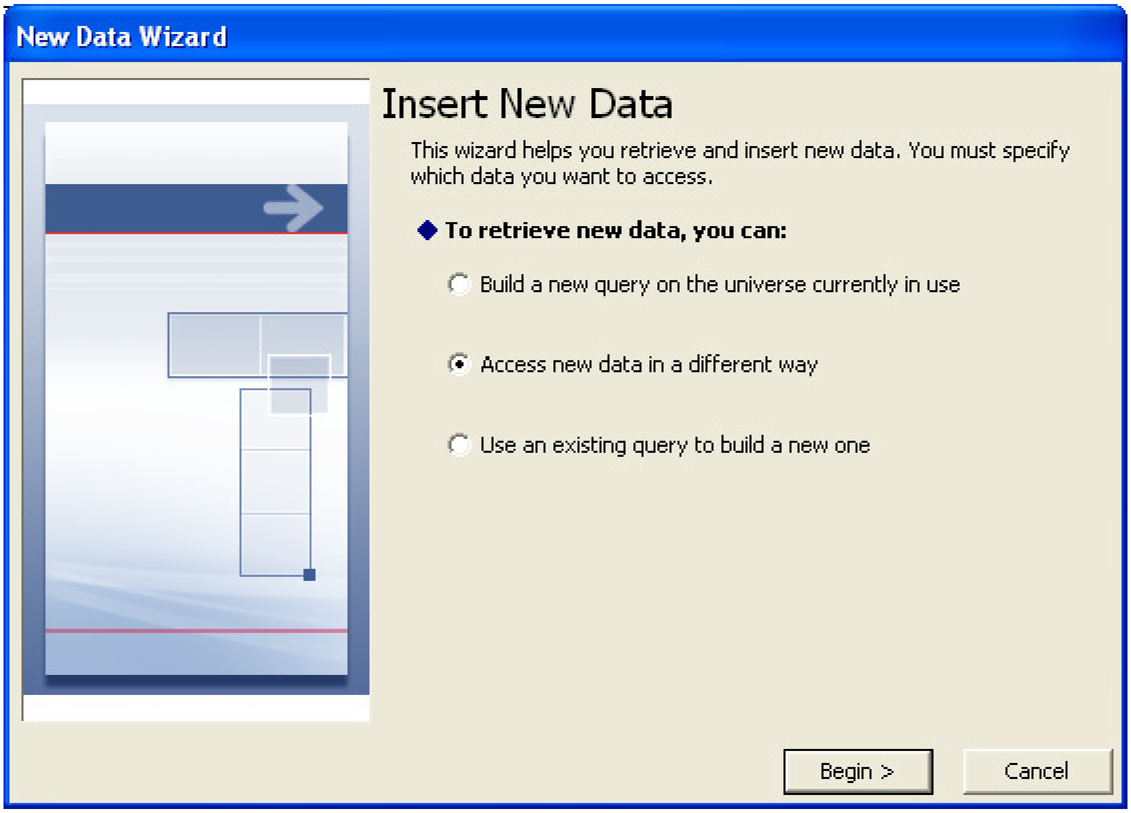
Now let's add *Department* to the report so that we may see what *Funds* are *Active* or *Inactive* for a given *Department*. You cannot add *Department* from the *Chart of Accounts Universe* until you create a logical connection between *Department* and *Fund*. The only way to do this is to use the *Valid Fund Department Class* in the *Accounting Template and Profile Universe* where *Department* and *Fund* are validated on a table called *CVIN_FUND_DEPT.*

14) Add another ***Data Provider*** using the ***Accounting Template and Profile Universe***.

a) In the ***Report Panel***, click on ***Data > New Data Provider***.

b) The *New Data Provider Wizard* will come up. Select ***Access new data in a different way****.*

c) Click ***Begin >***.



Insert New Data

This wizard helps you retrieve and insert new data. You must specify which data you want to access.

◆ **To retrieve new data, you can:**

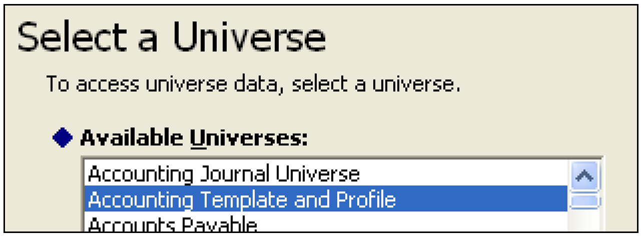
○ Build a new query on the universe currently in use

● Access new data in a different way

○ Use an existing query to build a new one

d) Select ***Universe*** and click ***Next***.

e) Select the ***Accounting Template and Profile*** universe from the *New Data Wizard*, then click ***Finish***.



Select a Universe

To access universe data, select a universe.

◆ **Available Universes:**

Accounting Journal Universe
Accounting Template and Profile
Accounts Payable

15) Add the following objects to the ***Result Objects Panel***.

Valid Fund Department > ***Dept Code***

Valid Fund Department > ***Fund Code***

16) Add the following conditions to the ***Conditions Panel.***

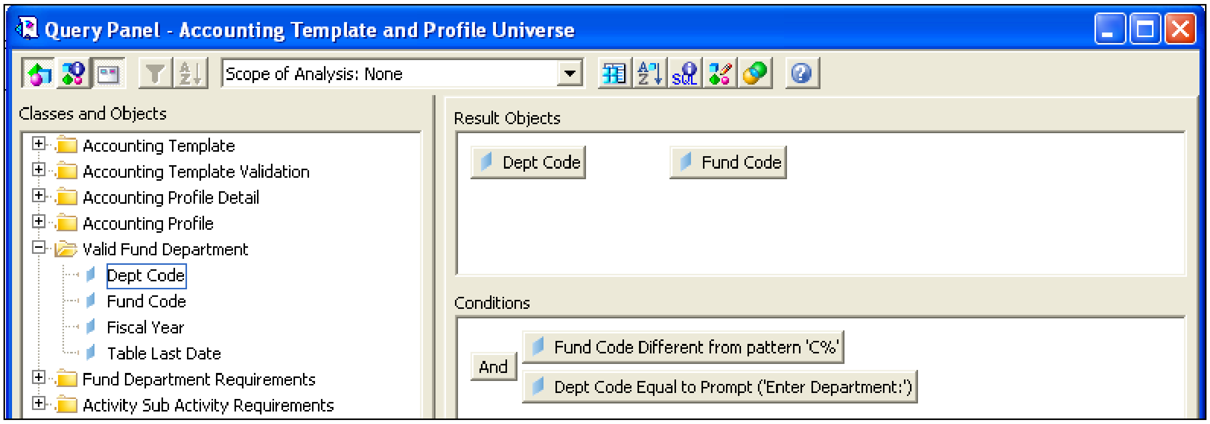
Fund Code **Different from pattern** 'C%'

AND

Dept Code **Equal to** Prompt *Enter Department:*

NOTE: Because *Fund Type* is not available in the *Accounting Template and Profile Universe*, we may use *Fund Code* to eliminate any *Capital Project Funds* from our report by pulling all *Funds* that do not start with a *C*.

For the exercise we will use a *Department Prompt*. If you were building this for only one department, you could set the *Department* equal to one department. However, if this was to be used statewide or as a *Cabinet* report, the user may only wish to see one department on the report. Another option would be to use *InList* so that more than one department may be reported on at a time.


Query Panel - Accounting Template and Profile Universe
Scope of Analysis: None
Classes and Objects
Accounting Template
Accounting Template Validation
Accounting Profile Detail
Accounting Profile
Valid Fund Department
Dept Code
Fund Code
Fiscal Year
Table Last Date
Fund Department Requirements
Activity Sub Activity Requirements
Result Objects
Dept Code
Fund Code
Conditions
And

Fund Code Different from pattern 'C%'

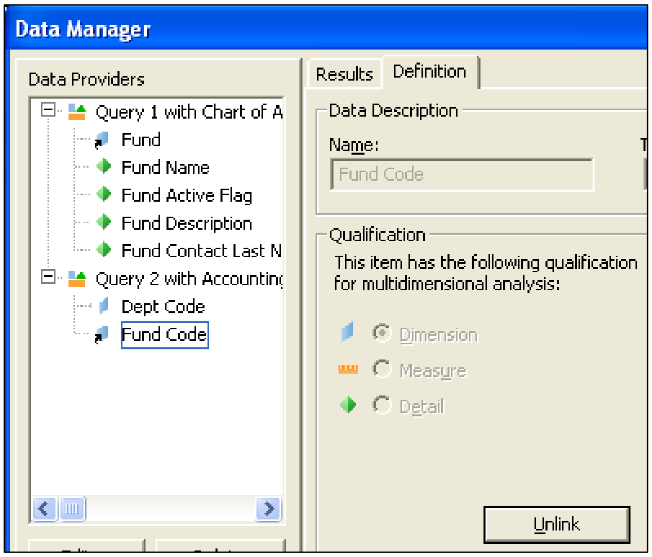
Dept Code Equal to Prompt ('Enter Department:')

17) Select ***Save and Close***.

18) Open the ***Data Manager***

19) Link ***Fund Code*** from ***Query 2 with Accounting Template and Profile*** to the ***Fund*** from ***Query 1 with Chart of Accounts.***

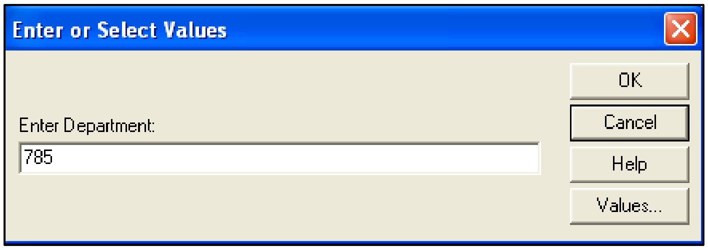
Even though the names of the objects are not the same, the values of the objects are similar. Objects with similar values may be joined even if the name of the object is different.


Data Manager
Data Providers
Query 1 with Chart of A
Fund
Fund Name
Fund Active Flag
Fund Description
Fund Contact Last N
Query 2 with Accounting
Dept Code
Fund Code
Results
Definition
Data Description
Name:
Fund Code
Qualification
This item has the following qualification for multidimensional analysis:
Dimension
Measure
Detail
Unlink

20) Create a ***Section*** on ***Dept Code***.

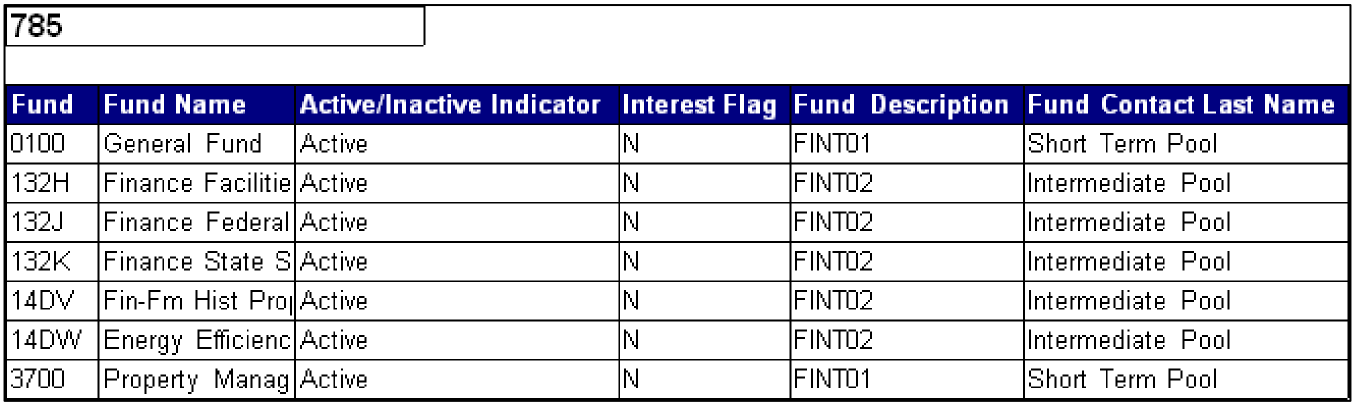
21) ***Refresh*** the report.

Enter **785** in the **prompt**.



Enter Department: 785

22) You should get results similar to this:

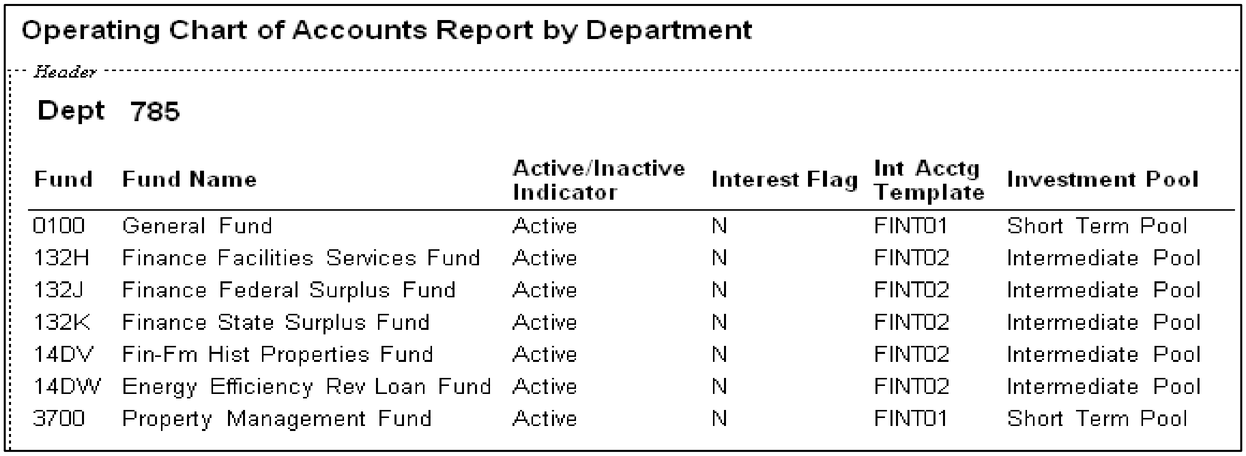


785

Fund	Fund Name	Active/Inactive Indicator	Interest Flag	Fund Description	Fund Contact Last Name
0100	General Fund	Active	N	FINT01	Short Term Pool
132H	Finance Facilitie	Active	N	FINT02	Intermediate Pool
132J	Finance Federal	Active	N	FINT02	Intermediate Pool
132K	Finance State S	Active	N	FINT02	Intermediate Pool
14DV	Fin-Fm Hist Proj	Active	N	FINT02	Intermediate Pool
14DW	Energy Efficienc	Active	N	FINT02	Intermediate Pool
3700	Property Manag	Active	N	FINT01	Short Term Pool

23) Now **clean up** the report.

- **a)** Give the report a **title.**
- **b)** Change the label for the ***Interest_Flag*** column to ***Interest Income***.
- **c)** Change the label for the ***Fund Contact Last Name*** column to ***Investment Pool***.
- **d)** Change the label for the ***Fund Description*** column to ***Int Acctg Template***.
- **e)** Add any **additional formatting** you want to make the report look the way you want.



Operating Chart of Accounts Report by Department

Dept 785

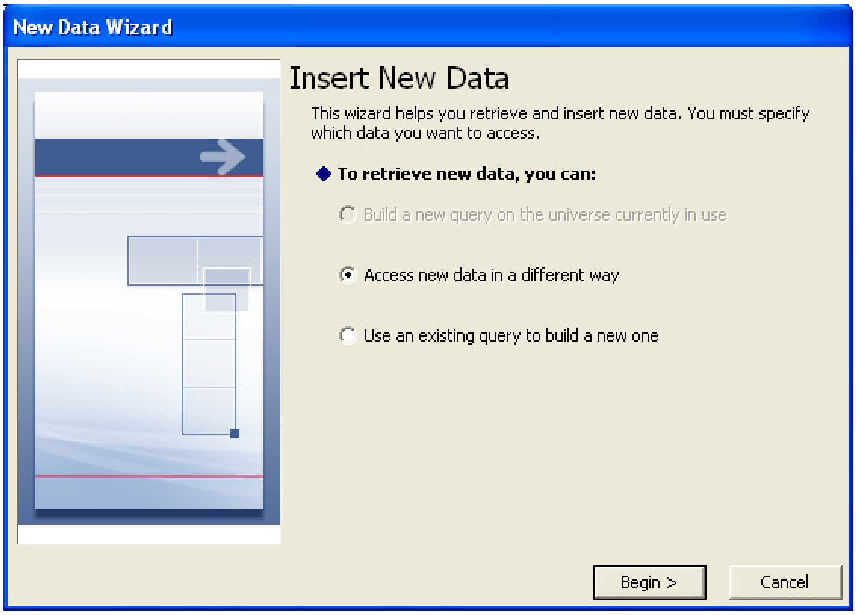
Fund	Fund Name	Active/Inactive Indicator	Interest Flag	Int Acctg Template	Investment Pool
0100	General Fund	Active	N	FINT01	Short Term Pool
132H	Finance Facilities Services Fund	Active	N	FINT02	Intermediate Pool
132J	Finance Federal Surplus Fund	Active	N	FINT02	Intermediate Pool
132K	Finance State Surplus Fund	Active	N	FINT02	Intermediate Pool
14DV	Fin-Fm Hist Properties Fund	Active	N	FINT02	Intermediate Pool
14DW	Energy Efficiency Rev Loan Fund	Active	N	FINT02	Intermediate Pool
3700	Property Management Fund	Active	N	FINT01	Short Term Pool

To make the report more user friendly, we need to also add *Department Name* and we may also add *Cabinet Name*. Because *Classes*, which are made up of different tables, are not joined in most *Kernal* universes, we will need to add another *Data Provider* in order to create a join that will allow us to add the additional objects to the report.

24) In the ***Report Panel***, click on ***Data > New Data Provider***.

Since there are two queries already in our table from two different universes, you will notice that *Build a new query on the universe currently in use* is not available as a selection.

Select ***Access new data in a different way*** then click ***Begin***.



New Data Wizard

Insert New Data

This wizard helps you retrieve and insert new data. You must specify which data you want to access.

◆ **To retrieve new data, you can:**

○ Build a new query on the universe currently in use

● Access new data in a different way

○ Use an existing query to build a new one

25) Select ***Universe*** and click ***Next***.

26) Select the ***Chart of Accounts*** universe.

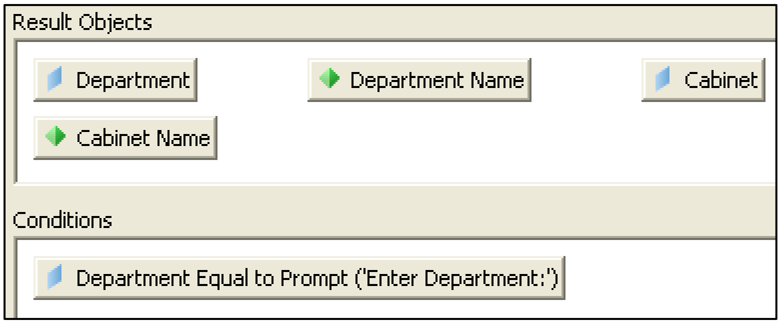
27) Add the following objects to the ***Result Objects Panel*** and conditions to the ***Conditions Panel:***

Department

Department Name

Cabinet

Cabinet Name



Result Objects

Department
Department Name
Cabinet
Cabinet Name

Conditions

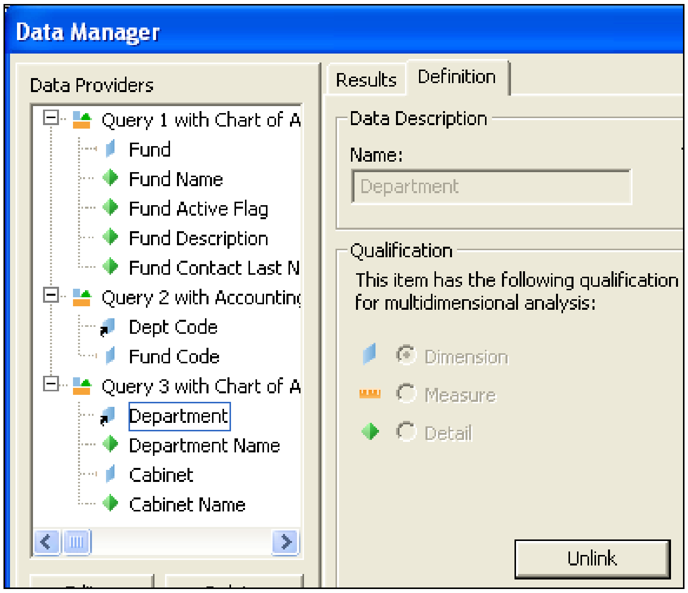
Department Equal to Prompt ('Enter Department:')

Condition:

Department **Equal to** Prompt *Enter Department:*

28) Select ***Save and Close***.

29) Link the ***Department*** from ***Query 3 with Chart of Accounts*** to the ***Dept Code*** in ***Query 2 with Accounting Template and Profile***.


Data Manager
Data Providers
Query 1 with Chart of A
Fund
Fund Name
Fund Active Flag
Fund Description
Fund Contact Last N
Query 2 with Accounting
Dept Code
Fund Code
Query 3 with Chart of A
Department
Department Name
Cabinet
Cabinet Name
Results
Definition
Data Description
Qualification
Dimension
Measure
Detail
Unlink

Name: Department

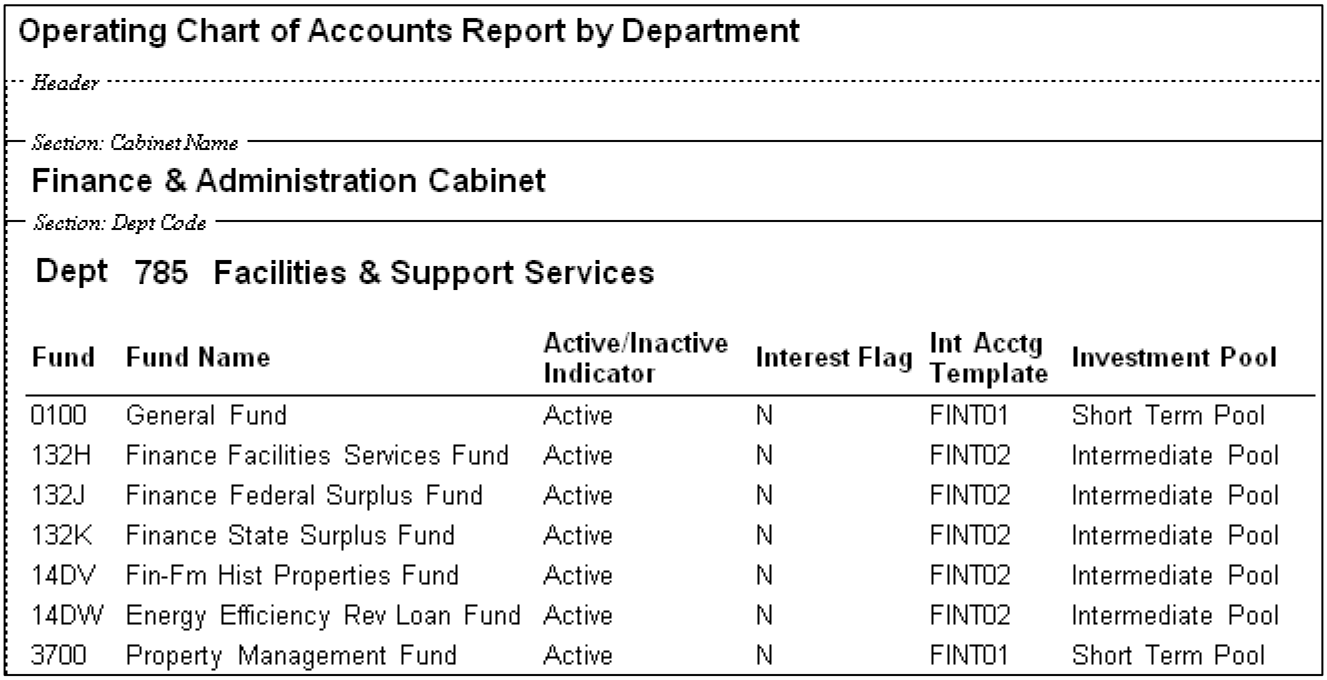
This item has the following qualification for multidimensional analysis:

◉ Dimension
○ Measure
○ Detail

30) ***Refresh*** the report

31) Add the ***Department Name*** to the ***Dept Code Section*** using a ***Blank Cell.***

32) Create a ***Cabinet Name Section*** above the ***Dept Code Section***.


Header
Section: Cabinet Name
Section: Dept Code

Operating Chart of Accounts Report by Department

Finance & Administration Cabinet

Dept 785 Facilities & Support Services

Fund	Fund Name	Active/Inactive Indicator	Interest Flag	Int Acctg Template	Investment Pool
0100	General Fund	Active	N	FINT01	Short Term Pool
132H	Finance Facilities Services Fund	Active	N	FINT02	Intermediate Pool
132J	Finance Federal Surplus Fund	Active	N	FINT02	Intermediate Pool
132K	Finance State Surplus Fund	Active	N	FINT02	Intermediate Pool
14DV	Fin-Fm Hist Properties Fund	Active	N	FINT02	Intermediate Pool
14DW	Energy Efficiency Rev Loan Fund	Active	N	FINT02	Intermediate Pool
3700	Property Management Fund	Active	N	FINT01	Short Term Pool

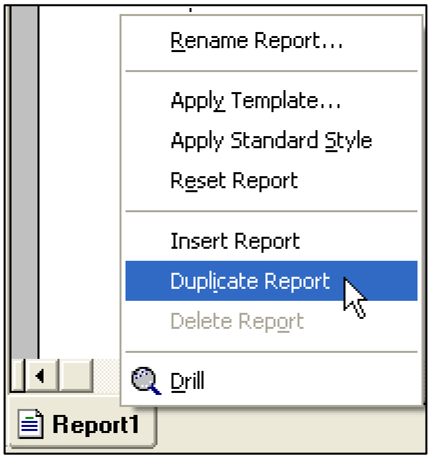
33) Now let’s create **multiple tabs** on the report to filter the data in different ways.

The first tab will include all of the **funds.**

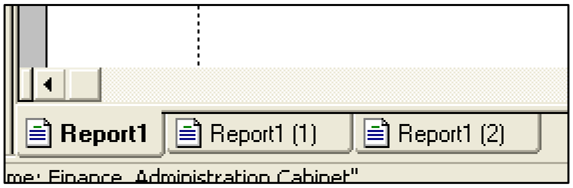
The second tab will contain the **“*Active*” funds.**

The third tab will contain the **“*Inactive*” funds.**

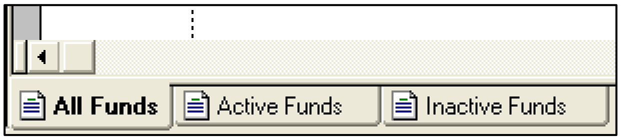
To create the tabs, right click on the ***Report 1*** tab near the bottom of the report.


Rename Report...
Apply Template...
Apply Standard Style
Reset Report
Insert Report
Duplicate Report
Delete Report
Drill
Report1

34) Select ***Duplicate Report****.* Repeat so that there are three tabs total.


Report1
Report1 (1)
Report1 (2)
me: Finance Administration Cabinet"

35) Right click on the **first tab** and select ***Rename Report*****.** Change the name to ***All Funds***. Change the second tab to ***Active Funds*** and the third tab to ***Inactive Funds****.*


All Funds
Active Funds
Inactive Funds

Next, we must add **filters** to the tables on the ***Active Funds*** and ***Inactive Funds*** tabs.

36) Select the ***Active Funds*** tab.

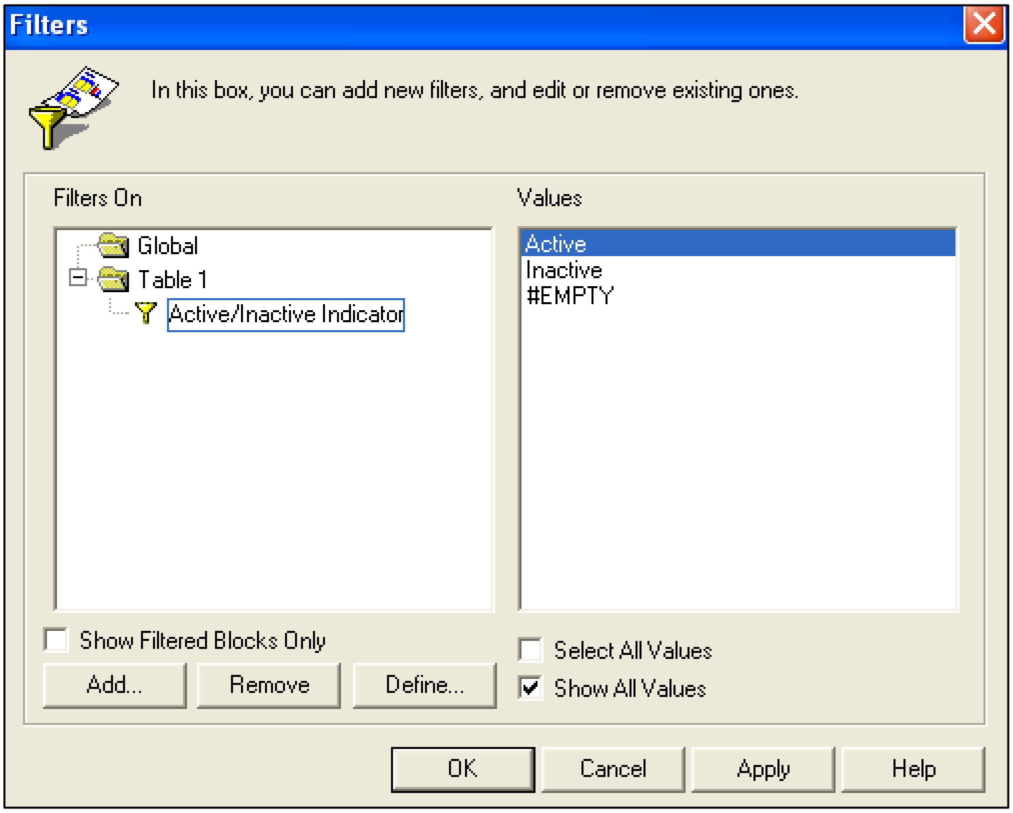
37) Select ***Format > Filters***.

38) Select ***Table 1***.

39) Select ***Add***.

40) Select the **Active/Inactive Indicator** from the Variable(s) to Filter and select **OK.**

41) Select "***Active***" from the ***Values*** list and select ***OK***.



In this box, you can add new filters, and edit or remove existing ones.

Filters On

- Global
- Table 1
  - Active/Inactive Indicator

Values

- Active
- Inactive
- #EMPTY

☐ Show Filtered Blocks Only

☐ Select All Values

☑ Show All Values

42) Repeat ***Steps 34*** through ***39*** for the ***Inactive Funds*** tab.

Be sure to select "***Inactive***" from the ***Values*** list for this tab instead of ***Active.***

Since we are using *Department 785* for the training there may not be any inactive funds for that department; therefore, the report on the *Inactive Funds* tab may be blank.

43) ***Save*** your report.

44) ***Send*** the report to your **eMARS ID** if you wish.

45) ***Close*** the report.

Chapter 12: Drill Down and Scope of Analysis

Drilling

Drill mode is an analysis tool that allows a user to analyze a report by breaking down data into different levels of detail. It is a very useful tool for discovering reasons for trends and computing totals such as sums or counts for various levels of aggregation. Analysis is performed by navigating up and down or across one or several hierarchies of data. You drill down on data to examine the underlying detail and drill up to examine the totals for that underlying detail.

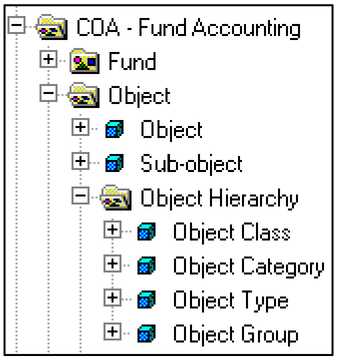
A Desktop Intelligence report that uses *Drill Down* and *Scope of Analysis* functionality will become static meaning that users will not be able to use *Drill Down* once the report has been published in *infoAdvantage*. On the other hand, if a report is created in infoAdvantage Webi using *Drill Down* and *Scope of Analysis*, users will be able to utilize *Drill Down* because the report remains dynamic. Using *Drill Down* functionality and *Scope of Analysis* in Desktop Intelligence is only useful if you are viewing the report and analyzing the data directly within Desktop Intelligence.

Hierarchies

In order to drill, the objects in a universe must be organized into hierarchies, with the most general objects at the top and the most detailed objects at the bottom. A hierarchy has a "one to many" relationship from the top level down to the next level.

The default hierarchies used for drilling are the order of the objects in the universe classes. For example, the following classes are set up as hierarchies in the *General Accounting Universe*:

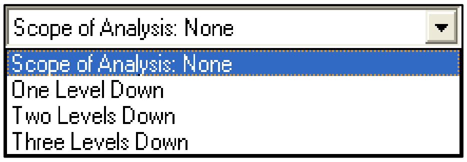
Object Class:	Object, Sub-object
Object Hierarchy Class:	Object Class, Object Category, Object Type, Object Group.



Scope of Analysis

Scope of Analysis determines the additional objects to be included in the query so that the data will be available in drill mode. Before you can drill, you must use *Scope of Analysis* to select the objects to be retrieved in addition to those that were placed in the *Result Objects Panel*. Setting the scope before running a query allows objects lower down the hierarchy to be included in the query, without them appearing in the *Result Objects Panel.* The query then retrieves extra data from the database to provide more details for each of the objects in a query.

The levels of scope consist of setting the scope to *None*, setting the scope *One, Two* or *Three Levels Down* into the hierarchy and setting a *Custom Scope*. With scope set to *None*, only the objects that appear in the *Result Objects* pane are included in the query.



When the query is run, all objects (those listed in the *Query Panel* and those checked on the *Scope of Analysis* screen) are retrieved from the data base and stored in the *Data Provider*. The lower level objects that were checked in the *Scope of Analysis* do not appear until you start to drill.

Simple Drilling

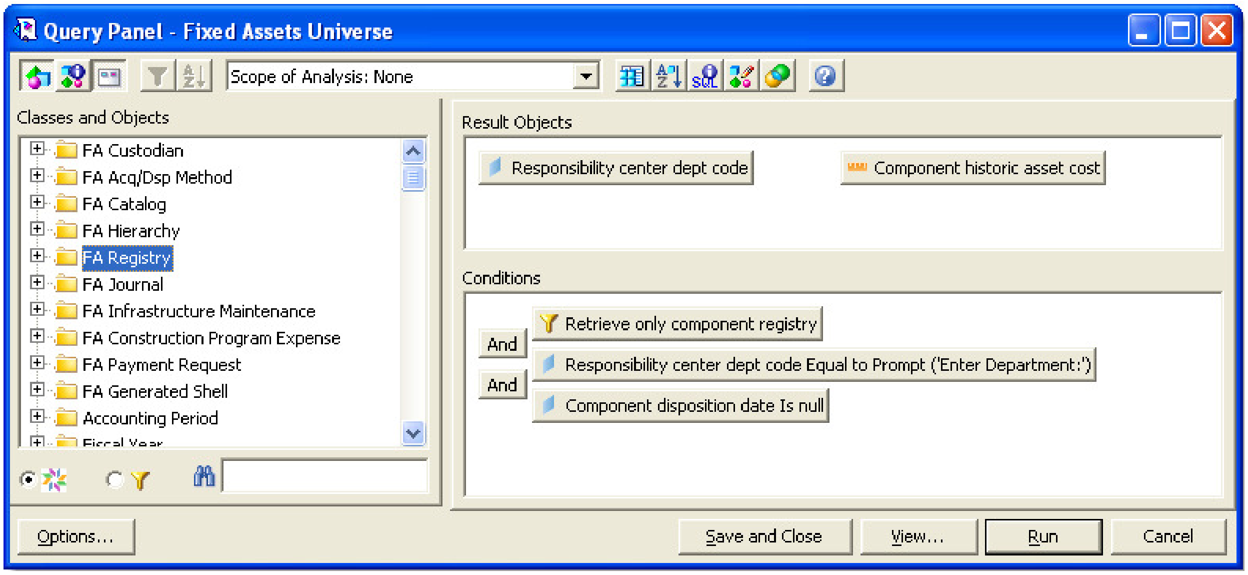
The simplest drilling consists of moving up or down on objects in the same class or hierarchy. In the following example, a report will be built from the *Fixed Assets* universe in order to demonstrate how drilling works. (See Appendix H for tips regarding the use of this universe.) At the end of the chapter, an example using accounting data will be shown.

1) Create a new report using the ***Fixed Assets*** universe.

2) Drag the following objects into the ***Result Objects*** panel:

FA Registry > Fixed Asset > Fixed Asset Details > ***Responsibility center dept code***

FA Registry > Fixed Asset Component Details > Fixed Asset Component Financials > ***Component historic asset cost***



Query Panel - Fixed Assets Universe

Scope of Analysis: None

Result Objects

Responsibility center dept code | Component historic asset cost

Conditions

Retrieve only component registry

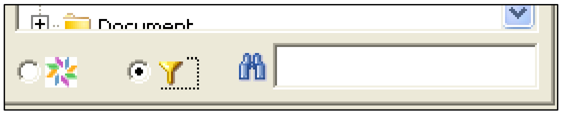
And Responsibility center dept code Equal to Prompt ('Enter Department:')

And Component disposition date Is null

Classes and Objects
FA Custodian
FA Acq/Dsp Method
FA Catalog
FA Hierarchy
FA Registry
FA Journal
FA Infrastructure Maintenance
FA Construction Program Expense
FA Payment Request
FA Generated Shell
Accounting Period
Fiscal Year
Options...
Save and Close
View...
Run
Cancel

3) Click the filters radio button, then drag the following filter to the ***Conditions*** panel:

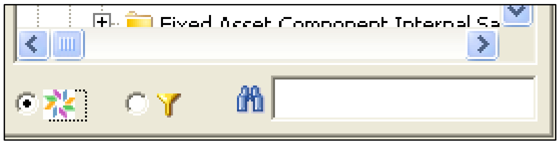
FA Registry > ***Retrieve only component registry***



4) Click the objects radio button, then add the following two additional filters to the ***Conditions*** panel (as shown):

FA Registry > Fixed Asset > Fixed Asset Details > ***Responsibility center dept code*** prompt

FA Registry > Fixed Asset Component Details > Fixed Asset Component Financials > ***Component disposition date*** is null

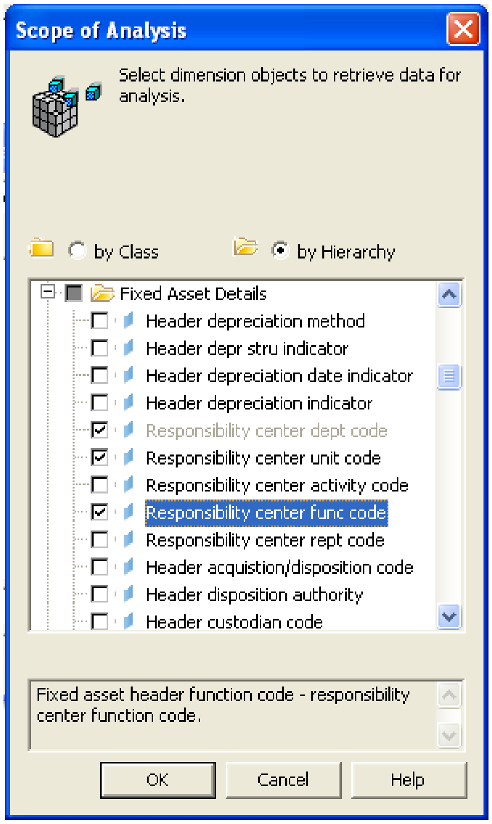


Fixed Asset Component Internal Sa

5) Click on the ***Scope of Analysis*** button on the ***Query Panel*** tool bar.

The *Scope of Analysis* dialog box will appear and show the hierarchies available for drilling. Scroll down until you see the list shown.

6) Check the boxes for ***Responsibility center unit code*** and ***Responsibility center func code***.



Scope of Analysis

Select dimension objects to retrieve data for analysis.

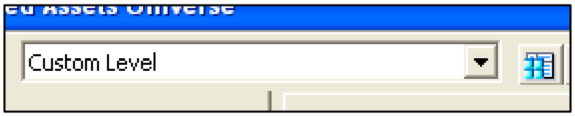
○ by Class ● by Hierarchy

- ☐ Fixed Asset Details
  - ☐ Header depreciation method
  - ☐ Header depr stru indicator
  - ☐ Header depreciation date indicator
  - ☐ Header depreciation indicator
  - ☑ Responsibility center dept code
  - ☑ Responsibility center unit code
  - ☐ Responsibility center activity code
  - ☑ Responsibility center func code
  - ☐ Responsibility center rept code
  - ☐ Header acquistion/disposition code
  - ☐ Header disposition authority
  - ☐ Header custodian code

Fixed asset header function code - responsibility center function code.

7) Click ***OK***.

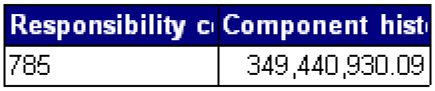
Observe that the *Scope of Analysis* drop down list has changed from *Scope of Analysis*: *None* to *Custom Level.*



Custom Level

Custom Level indicates that we set up our *Scope of Analysis* manually, rather than by using the drop down list which allows us to select by default only one, two or three levels for drilling.

8) ***Run*** the query using Department ***785***. The report should display the total historic cost of all fixed assets for the department. It should look similar to this (amounts may vary).



Responsibility c	Component hist
785	349,440,930.09

9) Click the ***Drill*** button to start ***Drill Mode***.

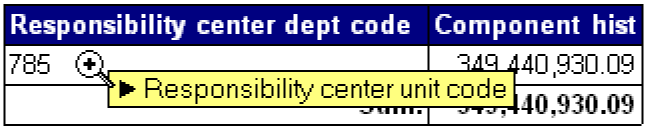
You may also activate *Drill Mode* by choosing *Analysis > Drill* on the menu bar, or right-clicking the *Report 1* tab and then choosing *Drill.*

Notice that **Report1 (1)**:

- A new report tab called *Report 1 (1)* was created with a duplicate of our original report. The original remains untouched.
- The new tab has a drill icon, which indicates that you are now in drill mode.
- A *Sum* calculation for *Component historic asset cost* was added to the table.

10) Position the mouse over the ***Responsibility center dept code***.

The mouse pointer changes to a magnifying glass containing a plus sign (+) indicating you may drill down on this value. A tool tip appears with the name of the object you will drill down to (***Responsibility center unit code***).



Responsibility center dept code	Component hist
785	349,440,930.09
Sum:	440,930.09

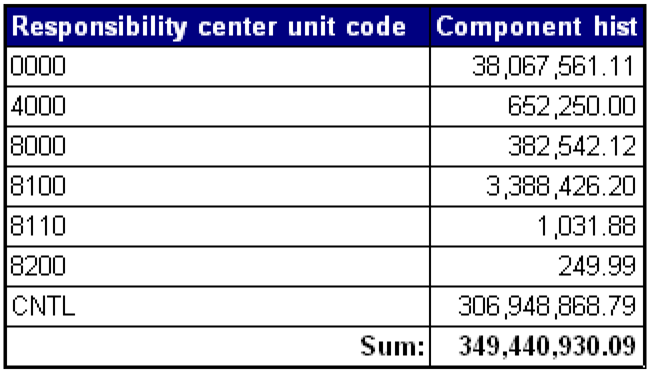
► Responsibility center unit code

Drilling Down

Now, we will actually drill down into the report to analyze the fixed assets for a particular department.

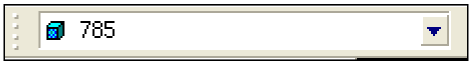
11) Double-click on the ***Responsibility center dept code*** to drill to the next lower level.

We have now drilled down to the ***Responsibility center unit code*** level. We can now see how the fixed assets are distributed across Units within the Department.



Responsibility center unit code	Component hist
0000	38,067,561.11
4000	652,250.00
8000	382,542.12
8100	3,388,426.20
8110	1,031.88
8200	249.99
CNTL	306,948,868.79
Sum:	**349,440,930.09**

Notice:

- A new drop down list  is displayed and shows that the data we are viewing is for Department 785.

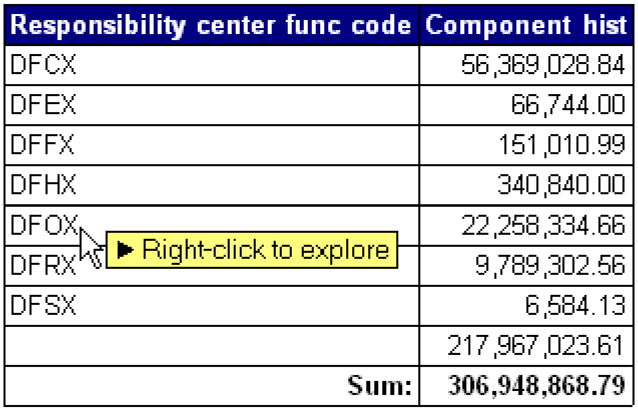
- The data in the report is filtered based on the value displayed in the drill toolbar. (This will not be noticeable since we had already filtered for this Department in our ***Conditions***.)

12) Move your cursor to the row for ***CNTL*** and **double click**.

We are now at the lowest level, since *Responsibility center func code* was the last level we selected in the hierarchy.

Notice that at the lowest level:

- The sum total of the measure object *Component historic asset cost* has been recalculated to include the eight Function codes only.
- The magnifying glass cursor has changed to the normal arrow cursor, since we are now at the bottom of the drill hierarchy.
- The tooltip message *Right-click to explore* displays when the cursor rests on a *Function* code to indicate that this is the lowest level that can be drilled.



Responsibility center func code	Component hist
DFCX	56,369,028.84
DFEX	66,744.00
DFFX	151,010.99
DFHX	340,840.00
DFOX	22,258,334.66
DFRX	9,789,302.56
DFSX	6,584.13
	217,967,023.61
Sum:	**306,948,868.79**

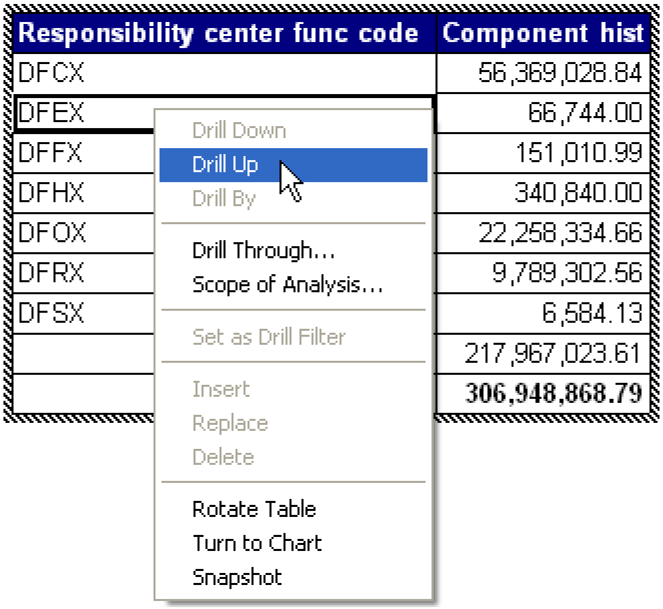
Drilling Up

In drilling up, you ascend the hierarchy and display data on a less detailed level at each step.

There are two ways of drilling up:

- By using the *Pop-up Menu*
- By double-clicking on the sum value at the bottom of the report.

13) Right-click on a ***Function*** value and click on ***Drill Up***.



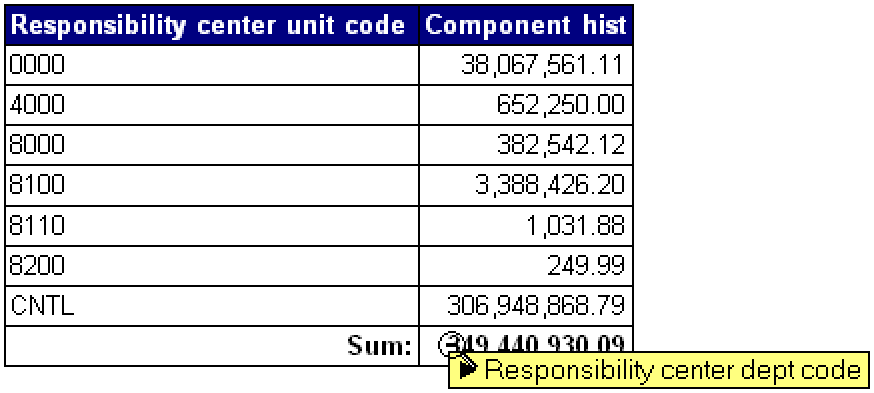
Responsibility center func code	Component hist
DFCX	56,369,028.84
DFEX	66,744.00
DFFX	151,010.99
DFHX	340,840.00
DFOX	22,258,334.66
DFRX	9,789,302.56
DFSX	6,584.13
	217,967,023.61
	306,948,868.79

Drill Down
Drill Up
Drill By
Drill Through...
Scope of Analysis...
Set as Drill Filter
Insert
Replace
Delete
Rotate Table
Turn to Chart
Snapshot

Responsibility center unit code is the next level up. The Unit codes for Department 785 are displayed, and the sum total is recalculated.

Another way to drill up is by double-clicking on the sum value at the bottom of the report. This way will take you up the exact path that you drilled down.

14) Rest your cursor over the cell with the **value for sum**.



Responsibility center unit code	Component hist
0000	38,067,561.11
4000	652,250.00
8000	382,542.12
8100	3,388,426.20
8110	1,031.88
8200	249.99
CNTL	306,948,868.79
Sum:	349,440,930.09

Responsibility center dept code

The cursor changes to a magnifying glass with a (-) sign, to indicate that you may drill up. A label appears with the name of the higher hierarchy level (*Responsibility center dept code*).

15) Double-click to drill up to the top level of the class hierarchy, ***Responsibility center dept code***.

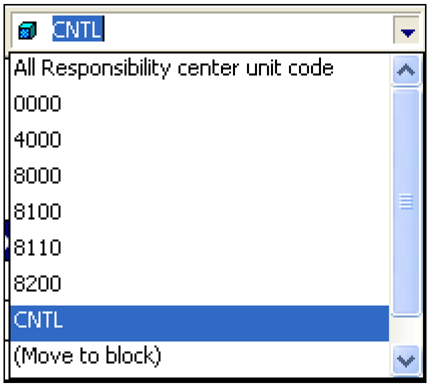
Drilling Across

You may also display different data by choosing other values from the drop down menu. This is called *Drilling Across*. *Drilling Across* shows totals for another value on the same level in the current hierarchy.

16) Drill down one level on Department **785**. The seven Unit codes are displayed.

17) Drill down another level on Unit **CNTL**. The eight Function codes are displayed.

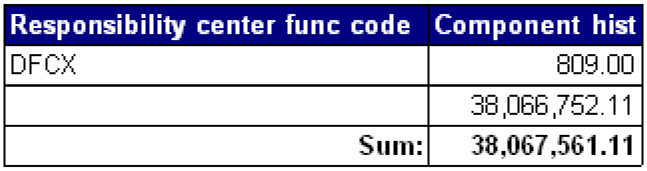
18) Click the **down arrow** on the **drop down list** for **Unit** codes**.**



Several additional features are available:

- **All Responsibility center unit code** – will display all *Function* codes for all *Unit* codes in the report.
- **(Move to block)** – will insert that column into the report block. For instance, in our report, it will move *Unit* from the drop down list and make it the first column in the report block.
- **(Remove)** – will remove that *Dimension* as part of the drilling hierarchy.

19) Click ***0000*** to drill across to the *Function* codes for *Unit* 0000.



Responsibility center func code	Component hist
DFCX	809.00
	38,066,752.11
Sum:	**38,067,561.11**

Drilling Through

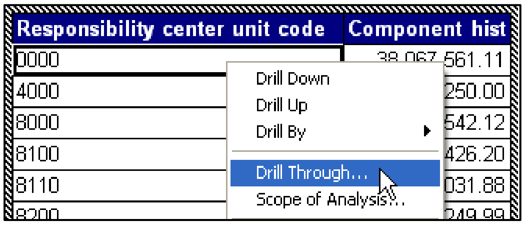
If you drilled down to the lowest level of data that was originally set up in the *Scope of Analysis,* but realized that you need an even lower level of detail for your report, you may retrieve it from the database without editing the query or resetting the *Scope of Analysis*. You may extend the *Data Provider* to include one and only one additional object at a time. This is called *Drilling Through.*

For example, in the report built from the *Fixed Assets* universe, we were able to drill down to the *Responsibility center dept code* by *Responsibility center unit code* to analyze the *Component historic asset cost* of fixed assets for those Units. If we drill down to the *Responsibility center unit code* level, we may also wish to see the costs by Activity code, Reporting code, and so forth. We may do so without editing our query.

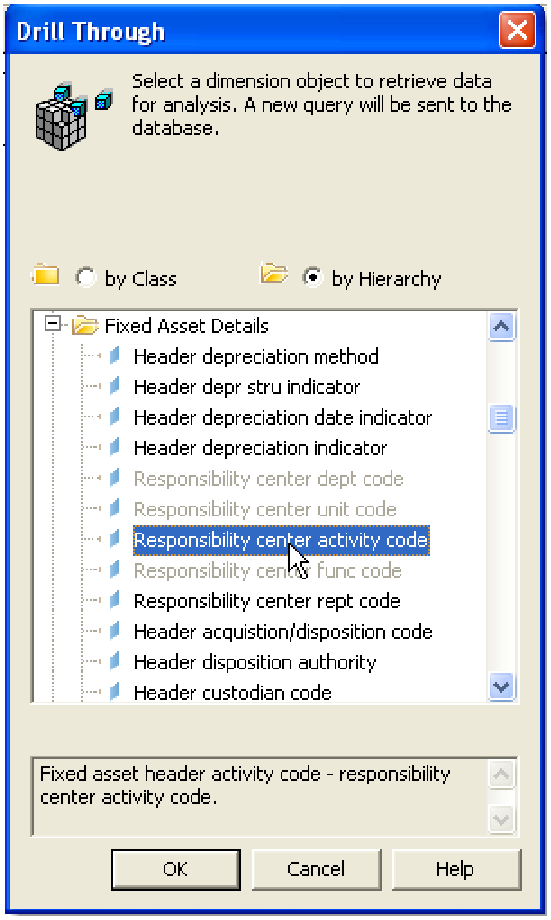
20) Drill down (or up, depending on your last drill) to the list of *Responsibility center unit codes*.

At this point, we wish to know the costs for each individual *Activity* for a particular unit. However, we did not include the *Responsibility center act code* class in our *Scope of Analysis*. We will now drill through to retrieve *Activity* codes.

21) Right-click on ***0000*** and choose ***Drill Through…*** from the pop-up menu.


Responsibility center unit code
Component hist
0000
4000
8000
8100
8110
8200
38,067,561.11
250.00
542.12
426.20
031.88
249.99
Drill Down
Drill Up
Drill By
Drill Through…
Scope of Analysis…

22) When the ***Drill Through*** dialog box appears, scroll down and double click on ***Responsibility center activity code,*** then click on ***OK***.

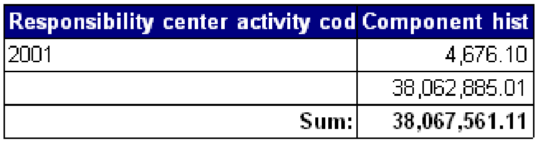

Drill Through
by Class
by Hierarchy
Fixed Asset Details
Header depreciation method
Header depr stru indicator
Header depreciation date indicator
Header depreciation indicator
Responsibility center dept code
Responsibility center unit code
Responsibility center activity code
Responsibility center func code
Responsibility center rept code
Header acquistion/disposition code
Header disposition authority
Header custodian code
OK
Cancel
Help

Select a dimension object to retrieve data for analysis. A new query will be sent to the database.

○ by Class ● by Hierarchy

Fixed asset header activity code - responsibility center activity code.

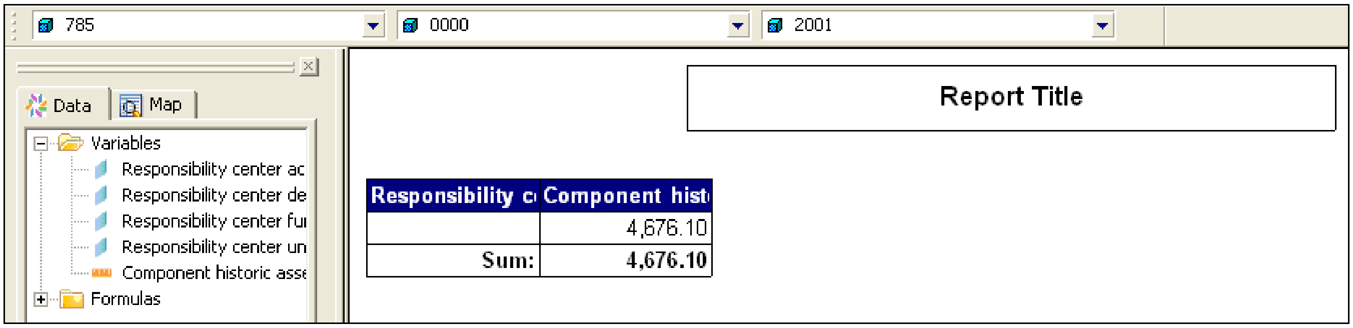
The report will refresh so that the *Component historic asset cost* total for Unit ***0000*** is now broken down to the *Activity* codes.



Responsibility center activity cod	Component hist
2001	4,676.10
	38,062,885.01
Sum:	**38,067,561.11**

Activity codes may then be broken down to *Responsibility center func code, Responsibility center rept code,* etc.

The further you *Drill Through* the more drop down boxes are available to you for analysis of the report.

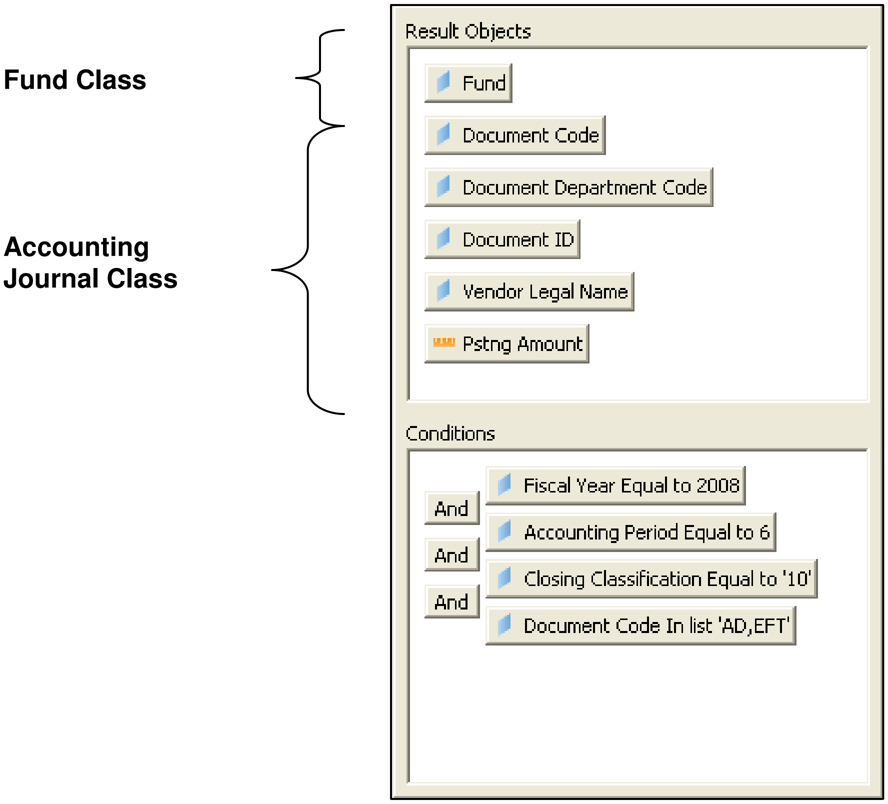

785
0000
2001
Data
Map
Variables
Responsibility center ac
Responsibility center de
Responsibility center fu
Responsibility center un
Component historic asse
Formulas
Report Title

Responsibility c	Component hist
	4,676.10
Sum:	**4,676.10**

To demostrate drilling using accounting data, we will build a simple *Expenditure* report at the *Document Level* and drill down to *Vendor Customer Number* and *Check Number.*

1) Create a new report from the ***General Accounting Universe***.

2) Use the following **objects** and **conditions**:



Fund Class

Accounting Journal Class

Result Objects

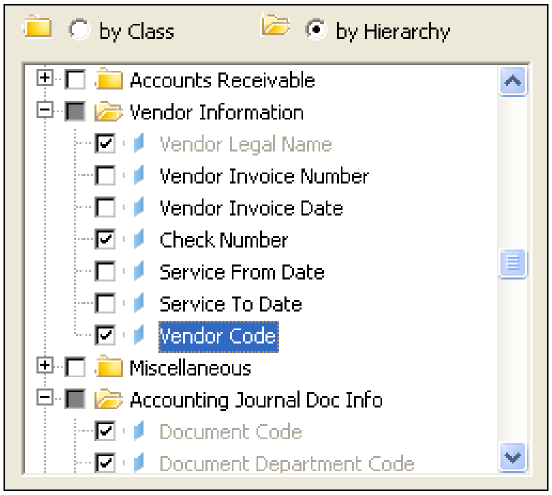
- Fund
- Document Code
- Document Department Code
- Document ID
- Vendor Legal Name
- Pstng Amount

Conditions

Fiscal Year Equal to 2008
And Accounting Period Equal to 6
And Closing Classification Equal to '10'
And Document Code In list 'AD,EFT'

3) Click on the ***Scope of Analysis*** button.

4) When the ***Scope of Analysis*** dialog box appears, find ***Vendor Information*** and select ***Check Number*** and ***Vendor Code***.



○ by Class ● by Hierarchy

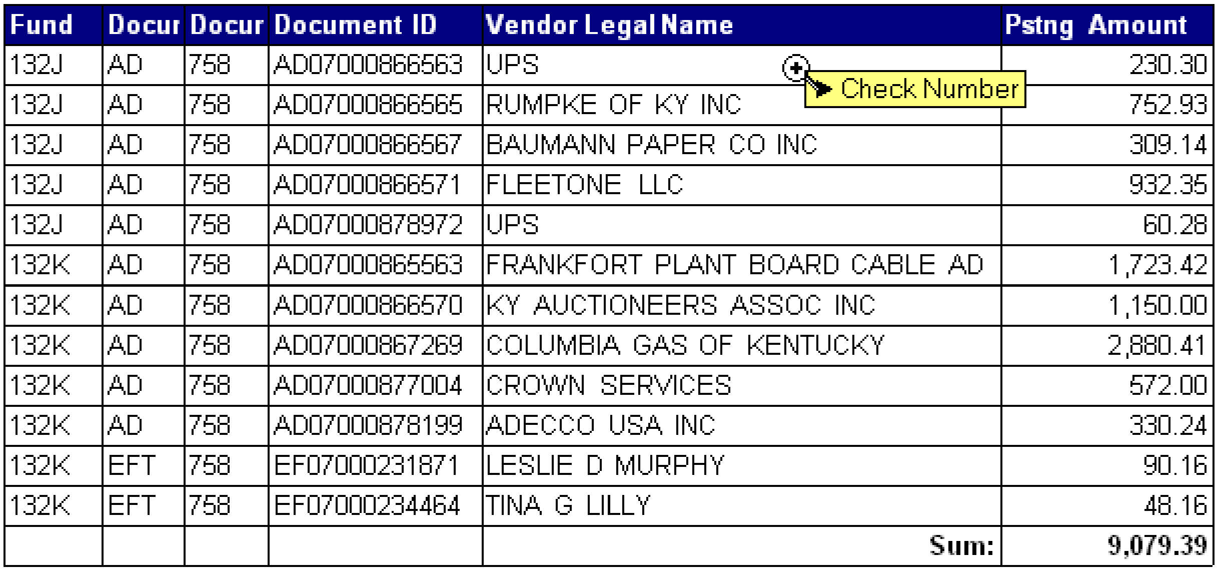
- ☐ Accounts Receivable
- ■ Vendor Information
  - ☑ Vendor Legal Name
  - ☐ Vendor Invoice Number
  - ☐ Vendor Invoice Date
  - ☑ Check Number
  - ☐ Service From Date
  - ☐ Service To Date
  - ☑ Vendor Code
- ☐ Miscellaneous
- ■ Accounting Journal Doc Info
  - ☑ Document Code
  - ☑ Document Department Code

5) Click ***OK***.

6) ***Run*** the Query.

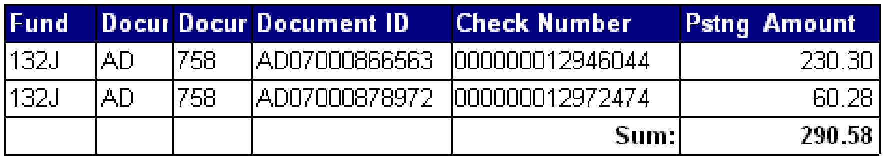
7) To narrow down the report and make it more managable, apply a report filter to ***Fund*** filtering for funds ***132J*** and ***132K***.

8) Click on the ***Drill Mode*** 🔍 button.



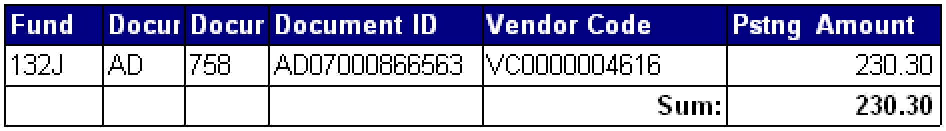
Fund	Docur	Docur	Document ID	Vendor Legal Name	Pstng Amount
132J	AD	758	AD07000866563	UPS	230.30
132J	AD	758	AD07000866565	RUMPKE OF KY INC	752.93
132J	AD	758	AD07000866567	BAUMANN PAPER CO INC	309.14
132J	AD	758	AD07000866571	FLEETONE LLC	932.35
132J	AD	758	AD07000878972	UPS	60.28
132K	AD	758	AD07000865563	FRANKFORT PLANT BOARD CABLE AD	1,723.42
132K	AD	758	AD07000866570	KY AUCTIONEERS ASSOC INC	1,150.00
132K	AD	758	AD07000867269	COLUMBIA GAS OF KENTUCKY	2,880.41
132K	AD	758	AD07000877004	CROWN SERVICES	572.00
132K	AD	758	AD07000878199	ADECCO USA INC	330.24
132K	EFT	758	EF07000231871	LESLIE D MURPHY	90.16
132K	EFT	758	EF07000234464	TINA G LILLY	48.16
				Sum:	**9,079.39**

9) *Expenditures* were paid out of *Fund 132J* for *UPS*. Double-click on the ***UPS Vendor Legal Name*** to ***Drill Down*** to ***Check Number***.



Fund	Docur	Docur	Document ID	Check Number	Pstng Amount
132J	AD	758	AD07000866563	000000012946044	230.30
132J	AD	758	AD07000878972	000000012972474	60.28
				Sum:	**290.58**

10) To ***Drill Down*** to the ***Vendor Code***, double-click on ***Check Number***.



Fund	Docur	Docur	Document ID	Vendor Code	Pstng Amount
132J	AD	758	AD07000866563	VC0000004616	230.30
				Sum:	**230.30**

Drill Down and *Scope of Analysis* are two very powerful tools available to you for report analysis in Desktop Intelligence. Practice utilizing these tools when you get back to the office.

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Chapter 13: Combine Queries

Union Queries

The *Union Query* allows two or more queries to be concatenated. This means that the columns in one query will be *appended* to the columns of another query, thus creating one large set of data out of two smaller sets. *Union Queries* are probably the most common used of the three types of queries.

Query A

Jenn	31
Chris	29
Melissa	27

Query B

Billy	54
Marlene	54

A Union B

Jenn	31
Chris	29
Melissa	27
Billy	54
Marlene	54

Intersection Queries

The *Intersection Query* returns the rows that are in common to two or more queries. This query is usually used to find what is duplicated in two different sets of data.

Query A

November	10
January	19
March	3
July	16

Query B

September	22
January	19
March	3
October	6

A Intersect B

January	19
March	3

Minus Queries

The *Minus Query* removes the rows that are in common in two queries and returns the remaining rows from the first query.

Query A

November	10
January	19
March	3
July	16

Query B

September	22
January	19
March	3
October	6

A Minus B

November	10
July	16

Rules for Using Combine Queries

There are a few rules that must be followed before you may use combine queries:

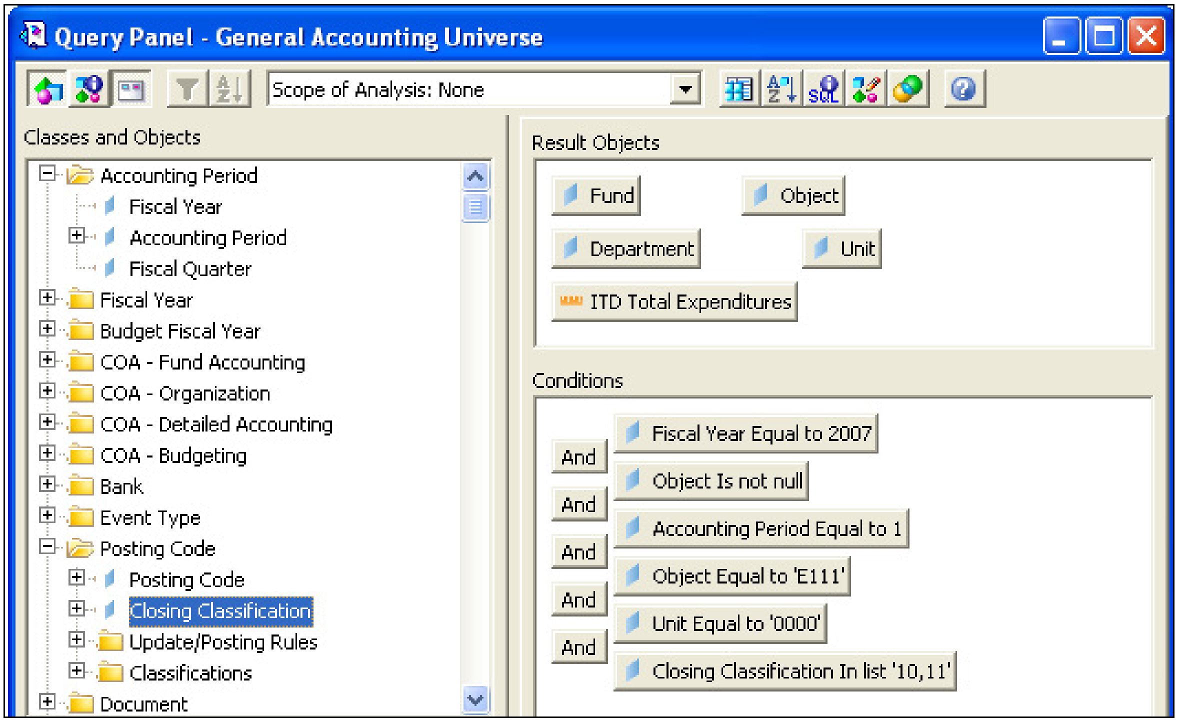
- Both queries must have the same number of columns. This is because the operators work on the columns in a set of data. In *Union Queries*, the operator wants to combine each column in one query to their respective column in another query. In *Intersection and Minus Queries*, the operators want to find the rows that are identical and either keep them or subtract them, respectively.
- The column types for each column must match their respective column types in the queries to be combined. This means that if the first column in query A is a number, then the first column in query B must also be a number. If the second column in query A is text, then the second column in query B must also be text.

If the above rules are not met, the *Run* button in the *Query Panel* will not be enabled and the query will not be able to be executed.

Example Union Query

Let's look at a simple example of how a union query works. We are going to build a report that uses a union query to pull expenditures in one query and revenue in the other. We will also add two data providers—one that will show expenditures, one that will show revenue, so we may see how the data is all appended in one table by using the union query.

1) Using the ***General Accounting Universe***, we are going to build our first query using the objects and conditions below.


Query Panel - General Accounting Universe
Scope of Analysis: None
Classes and Objects
Accounting Period
Fiscal Year
Accounting Period
Fiscal Quarter
Fiscal Year
Budget Fiscal Year
COA - Fund Accounting
COA - Organization
COA - Detailed Accounting
COA - Budgeting
Bank
Event Type
Posting Code
Posting Code
Closing Classification
Update/Posting Rules
Classifications
Document

Result Objects

Fund
Object
Department
Unit
ITD Total Expenditures

Conditions

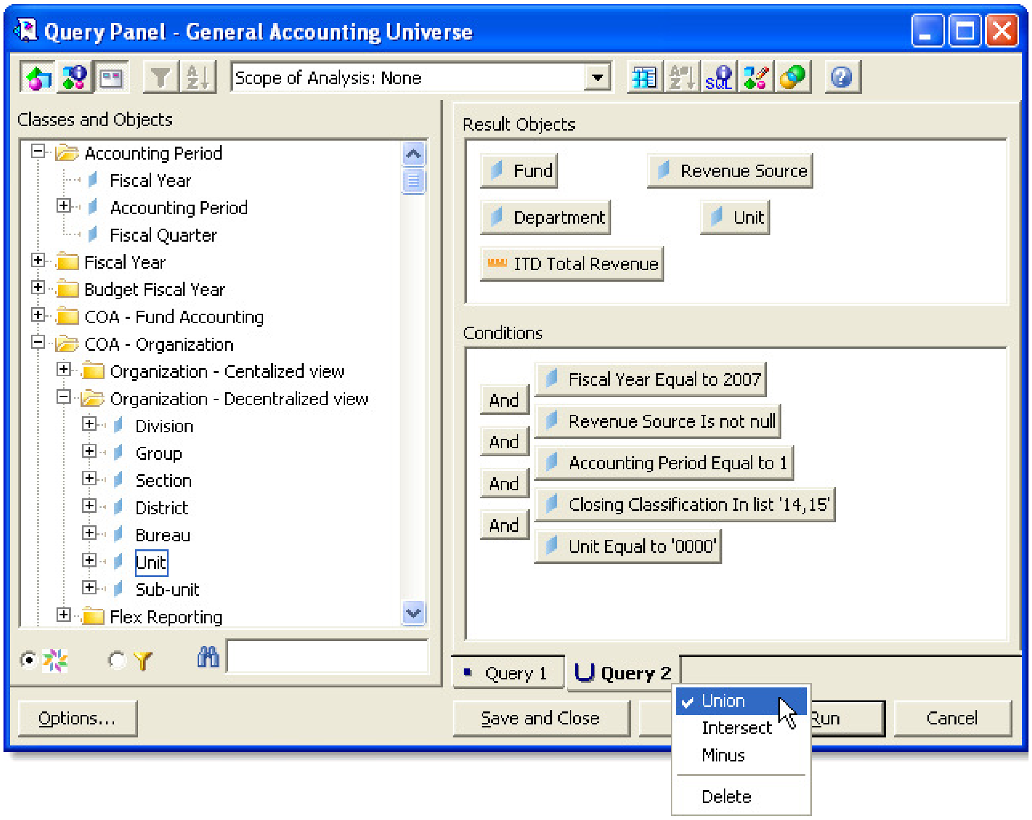
Fiscal Year Equal to 2007
And Object Is not null
And Accounting Period Equal to 1
And Object Equal to 'E111'
And Unit Equal to '0000'
And Closing Classification In list '10,11'

Note: The ITD Total Expenditures measure is found in the folder structure:

Accounting Journal > Calculated Amounts > ITD Total Expenditures

2) Next, we will create another query by clicking on the ***Combine Queries*** icon .

3) The **second query** will be built with the following **objects** and **conditions**. Notice the *Query 2* tab and the symbol. The *U* symbol represents a *Union Query*.


Query Panel - General Accounting Universe
Scope of Analysis: None
Classes and Objects
Accounting Period
Fiscal Year
Accounting Period
Fiscal Quarter
Fiscal Year
Budget Fiscal Year
COA - Fund Accounting
COA - Organization
Organization - Centalized view
Organization - Decentralized view
Division
Group
Section
District
Bureau
Unit
Sub-unit
Flex Reporting
Query 1
Query 2
Union
Intersect
Minus
Delete
Options...
Save and Close
Run
Cancel

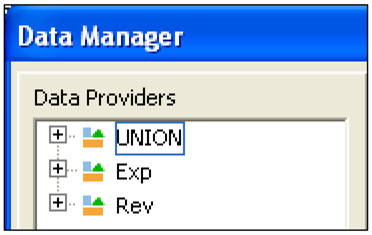
Result Objects
Fund
Revenue Source
Department
Unit
ITD Total Revenue

Conditions
Fiscal Year Equal to 2007
And Revenue Source Is not null
And Accounting Period Equal to 1
And Closing Classification In list '14,15'
And Unit Equal to '0000'

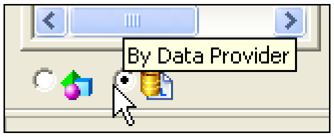
4) When we ***Run*** the union query, it will put everything in one table.

5) Before we talk about the results, let's go ahead and add **two *New Data Providers***. We will need one for ***Expenditures*** and one for ***Revenue***. The *Expenditure Query* will mirror *Query 1* above, and the *Revenue Query* will mirror *Query 2.*

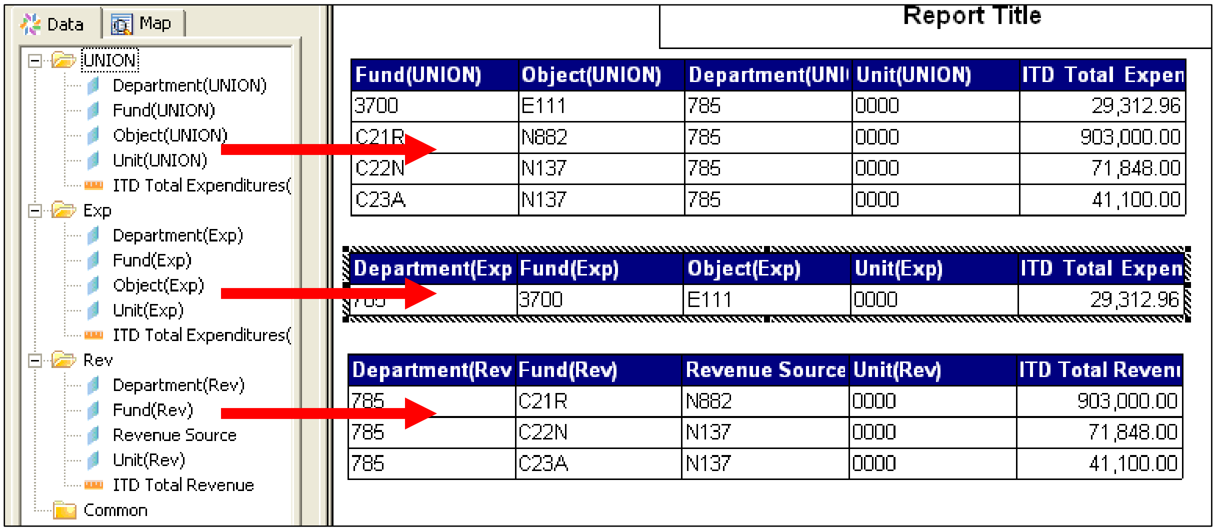
6) In the *Data Manager*, we can name the ***Data Providers*** to represent ***Union***, ***Expenditure (Exp)***, and ***Revenue (Rev)***.


Data Manager
Data Providers
UNION
Exp
Rev

7) In the bottom left corner of the ***Report Manager***, click the **button** next to the ***By Data Provider Icon*** in order to break out the objects by *Data Provider* in the *Report Manager*.


By Data Provider

8) Once we create the *New Data Providers*, let's add **two new tables** to the report. The first new table will show everything from the *Exp Data Provider* and the second new table will show everything from the *Rev Data Provider*.


Data
Map
UNION
Department(UNION)
Fund(UNION)
Object(UNION)
Unit(UNION)
ITD Total Expenditures(
Exp
Department(Exp)
Fund(Exp)
Object(Exp)
Unit(Exp)
ITD Total Expenditures(
Rev
Department(Rev)
Fund(Rev)
Revenue Source
Unit(Rev)
ITD Total Revenue
Common

Report Title

Fund(UNION)	Object(UNION)	Department(UNI	Unit(UNION)	ITD Total Expen
3700	E111	785	0000	29,312.96
C21R	N882	785	0000	903,000.00
C22N	N137	785	0000	71,848.00
C23A	N137	785	0000	41,100.00

Department(Exp	Fund(Exp)	Object(Exp)	Unit(Exp)	ITD Total Expen
785	3700	E111	0000	29,312.96

Department(Rev	Fund(Rev)	Revenue Source	Unit(Rev)	ITD Total Revenu
785	C21R	N882	0000	903,000.00
785	C22N	N137	0000	71,848.00
785	C23A	N137	0000	41,100.00

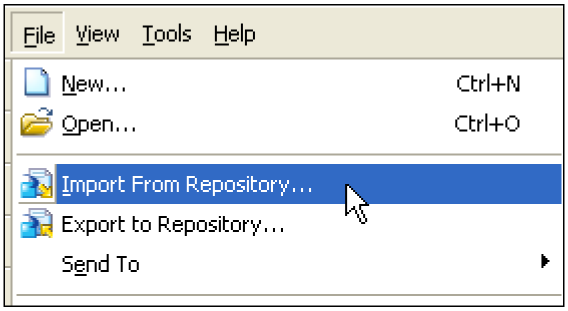
9) After adding the data providers and adding the tables to the reports ***Refresh*** the report just to be sure the report has been updated with all the data.

When you run the report, you will see that the *Union Query* returned expenditure and revenue data. The individual tables under the main table show which values are revenue and which values are expenditures.

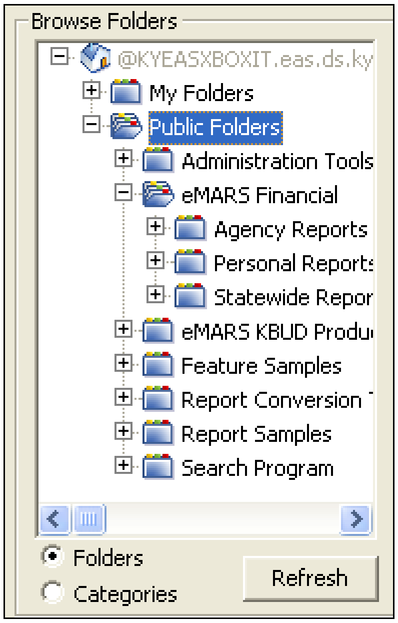
Chapter 14: Retrieving and Editing a Shared Report

As a report developer, you may find it beneficial to *Retrieve* a *Statewide Report* from the *Corporate Documents Repository* and edit that report to meet the needs of your department. For example, if your boss needs a report similar to the *Statewide 2152- Monthly Revenue by Fund_Dept_Func,* but would like to see the report modified, you may retrieve that report into Desktop Intelligence and modify it as needed.

1) On the menu bar, click on ***File > Import From Repository…***.


File
View
Tools
Help
New… Ctrl+N
Open… Ctrl+O
Import From Repository…
Export to Repository…
Send To

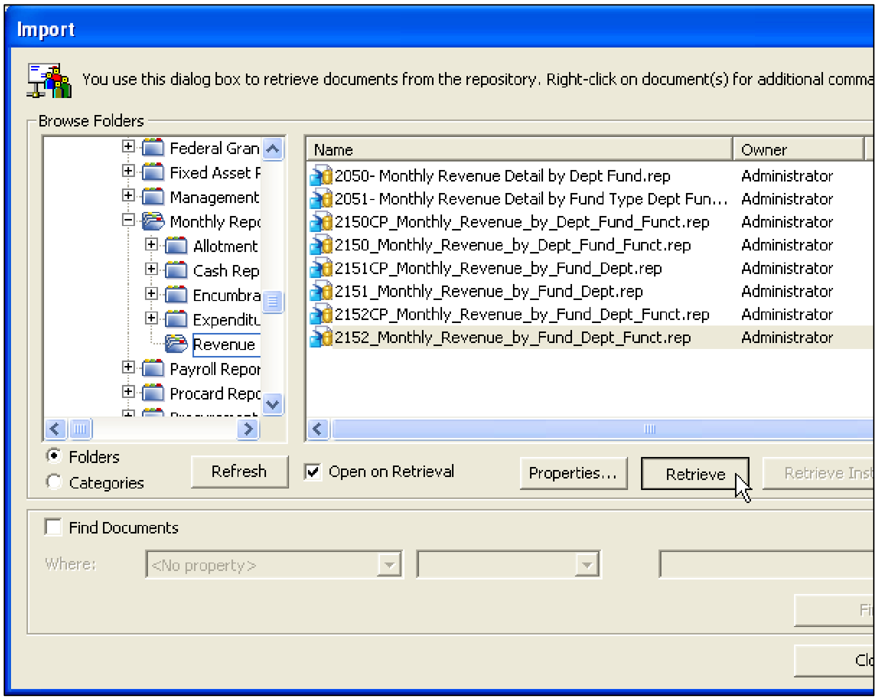
2) When the *Import* box appears, under *Browse Folders*, select the ***Folders*** radio button.


Browse Folders
@KYEASXBOXIT.eas.ds.ky
My Folders
Public Folders
Administration Tools
eMARS Financial
Agency Reports
Personal Reports
Statewide Repor
eMARS KBUD Produ
Feature Samples
Report Conversion
Report Samples
Search Program
● Folders
○ Categories
Refresh

3) Double-click the folder structure and navigate through it to the ***Public Folders > eMARS Financial > Statewide Reports > Monthly Reports > Revenue Reports*** folder. Select the ***2152- Monthly Revenue by Fund_Dept_Funct*** report.

4) Click on ***Retrieve*** to open the report on your computer.

If *Open on Retrieval* is checked, the report will automatically open for you. Otherwise, the report will be saved to your *Business Objects Documents* (*userdocs*) folder on your hard drive and you will have to open the report manually.

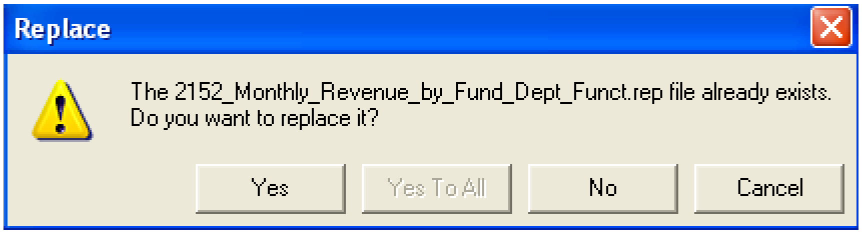

Import
Browse Folders
Federal Gran
Fixed Asset F
Management
Monthly Repo
Allotment
Cash Rep
Encumbra
Expenditu
Revenue
Payroll Repor
Procard Repo
Folders
Categories
Refresh
Properties...
Retrieve
Retrieve Inst
Find Documents
Where:
<No property>
Fi
Clo

You use this dialog box to retrieve documents from the repository. Right-click on document(s) for additional comma

Name	Owner
2050- Monthly Revenue Detail by Dept Fund.rep	Administrator
2051- Monthly Revenue Detail by Fund Type Dept Fun...	Administrator
2150CP_Monthly_Revenue_by_Dept_Fund_Funct.rep	Administrator
2150_Monthly_Revenue_by_Dept_Fund_Funct.rep	Administrator
2151CP_Monthly_Revenue_by_Fund_Dept.rep	Administrator
2151_Monthly_Revenue_by_Fund_Dept.rep	Administrator
2152CP_Monthly_Revenue_by_Fund_Dept_Funct.rep	Administrator
2152_Monthly_Revenue_by_Fund_Dept_Funct.rep	Administrator

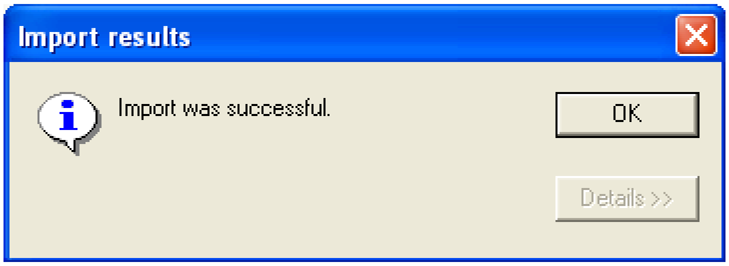
☑ Open on Retrieval

If you have previously retrieved a copy of a shared report, you may see the following message box. Unless you don't want to overwrite any previous copies of the report, click on *Yes*. If you select *No*, you will be prompted to save the report.


Replace
Yes
Yes To All
No
Cancel

The 2152_Monthly_Revenue_by_Fund_Dept_Funct.rep file already exists.
Do you want to replace it?

Otherwise, if it is the first time retrieving a report, you would receive the following message box telling you the *Import was successful*.


Import results
OK
Details >>

Import was successful.

You have received instructions from your boss to modify the *2152* report to show a breakdown of individual documents that posted for each *Fund*. He has also instructed you to delete *Dept* from the report since the report will only show data for your department when run. As well, he does not want the report broken down by *Function* at this time. Also, he does not want to see the *2152 Year To Date (YTD)* tab on the report. Since you will not be exporting the report to excel, the *Export to Excel* tabs may be deleted, too.

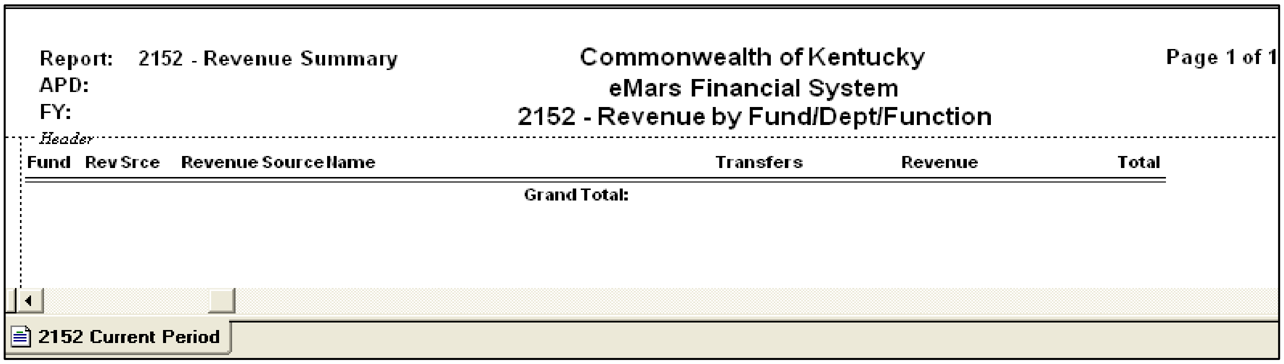
5) ***Save*** the report as ***Revenue by Fund***

6) Delete the ***2152 Year To Date (YTD)* tab**, the ***Export to Excel: 2152 Current Period* tab** and the ***Export to Excel: 2152 Year To Date (YTD)* tab** from the report.

7) Delete the ***Dept*** column from the remaining report. (*Hint: Use Structure View.*)

8) Delete the ***Function*** column from the report.

After making the above changes, your report should look similar to this. The query must be edited in order to make it a monthly detail report instead of a monthly and year to date summary report.



Report: 2152 - Revenue Summary
APD:
FY:

Commonwealth of Kentucky
eMars Financial System
2152 - Revenue by Fund/Dept/Function

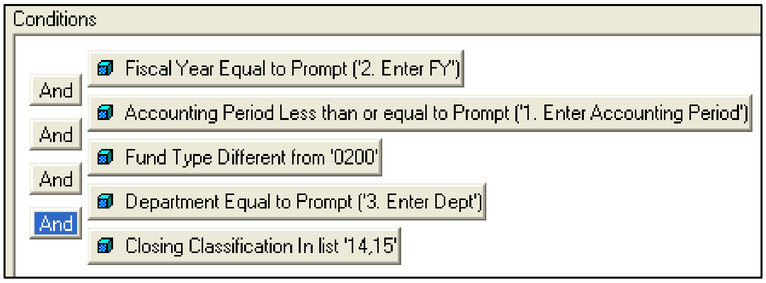
Page 1 of 1

Header

Fund	Rev Srce	Revenue Source Name	Transfers	Revenue	Total
		Grand Total:			

9) Click on the ***Edit Data Provider*** icon to edit the report query.

First, we should modify the conditions shown below to meet the needs of the report your boss has requested. The *Accounting Period* prompt can be changed from *Less than or equal to,* to just *Equal to* since the report will not include year to date information. For the *Department* prompt, this may be either deleted or modified. For training purposes, since the report will only return Department 785 data, we will delete the condition. However, if this report was being changed for someone who has access to more than one department, the condition could be modified to set the department equal to a specific department, or it may be left as is to allow the user to choose the department.

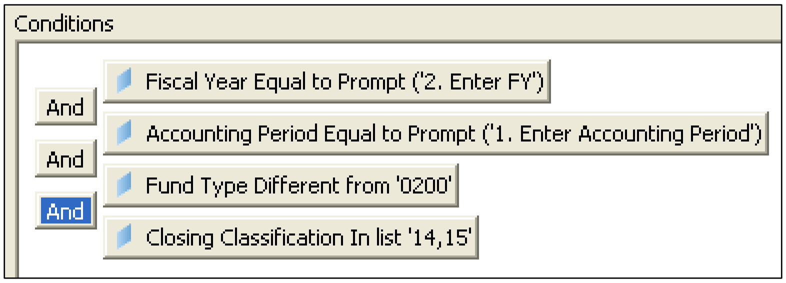


Conditions

And
Fiscal Year Equal to Prompt ('2. Enter FY')
And
Accounting Period Less than or equal to Prompt ('1. Enter Accounting Period')
And
Fund Type Different from '0200'
And
Department Equal to Prompt ('3. Enter Dept')
Closing Classification In list '14,15'

10) Change the ***Accounting Period* prompt** to be ***Equal to***.

11) Delete the ***Department*** **prompt** from the ***Conditions Panel.***

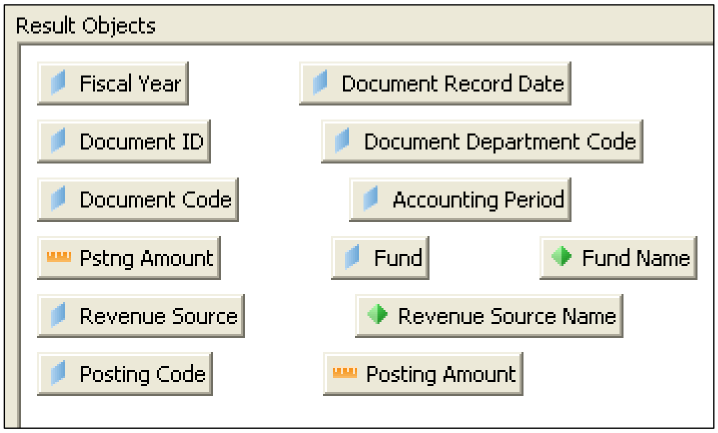

Conditions
And
And
And
Fiscal Year Equal to Prompt ('2. Enter FY')
Accounting Period Equal to Prompt ('1. Enter Accounting Period')
Fund Type Different from '0200'
Closing Classification In list '14,15'

Next, *Department, Department Name, Function,* and *Function Name* should be deleted from the *Result Objects Panel* since those objects are not needed in the report. *Posting Amount* should be pulled from the *Accounting Journal* (*Pstng Amount*) since document information should be included in the report. We will need to delete *Posting Amount*, but until the formulas in the variables used in the report are modified to reflect the *Pstng Amount* from the *Accounting Journal* instead of the *Summary Ledger*, we need to leave *Posting Amount* in the report. Document detail also needs to be added to the *Result Objects Panel*.

12) Delete ***Department***, ***Department Name***, ***Function*** and ***Function Name*** from the ***Result Objects Panel***.

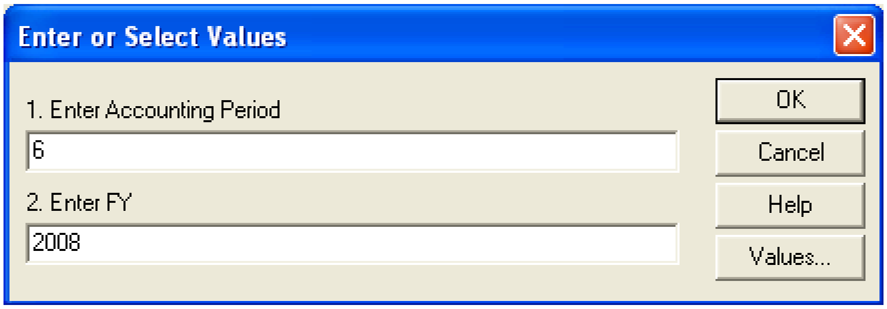
13) Drag the following objects into the ***Result Objects Panel***:

Accounting Journal > Accounting Journal Doc Info > ***Document Code***
Accounting Journal > Accounting Journal Doc Info > ***Document Department Code***
Accounting Journal > Accounting Journal Doc Info > ***Document ID***
Accounting Journal > Posting Details > ***Document Record Date***
Accounting Journal > ***Pstng Amount***


Result Objects
Fiscal Year
Document Record Date
Document ID
Document Department Code
Document Code
Accounting Period
Pstng Amount
Fund
Fund Name
Revenue Source
Revenue Source Name
Posting Code
Posting Amount

14) ***Run*** the query.

15) Use the following for the **prompts**:
1. *Enter Accounting Period* **6**
2. *Enter FY* **2008**


Enter or Select Values
OK
Cancel
Help
Values...

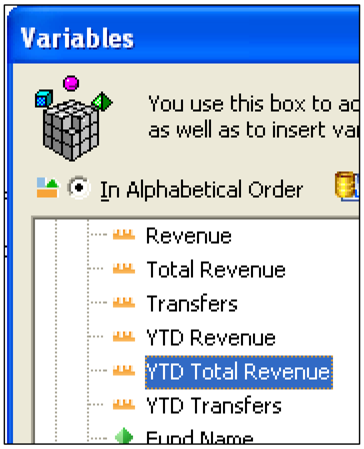
1. Enter Accounting Period
6
2. Enter FY
2008

16) If the new objects were automatically added to your report, in ***Structure View***, remove (**cut**) them from the table for now.

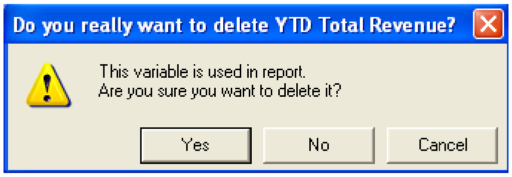
Next we need to modify any variables in the report to use *Pstng Amount* instead of *Posting Amount*. Once we do this, *Posting Amount* may be deleted from the query so that the query is not pulling from the *Summary Ledger* and the *Accounting Journal*, which will increase the report run time.

17) Click on ***Data > Variables*** on the menu bar.

18) Since the report is not year to date, we may ***Remove*** the variables ***YTD Revenue flag***, ***YTD Total Revenue flag***, and ***YTD Transfers flag***, as well as the ***YTD Revenue***, ***YTD Total Revenue***, and ***YTD Transfers*** variables.


Variables
You use this box to ac
as well as to insert va
In Alphabetical Order
Revenue
Total Revenue
Transfers
YTD Revenue
YTD Total Revenue
YTD Transfers
Fund Name

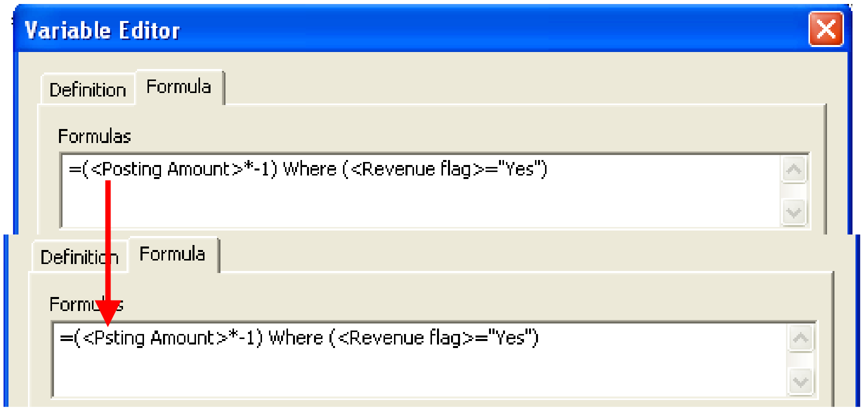
19) Each time you ***Remove*** a variable from the report, a **message box** will appear asking you if you really want to delete the variable from the report. Click on ***Yes***.


Do you really want to delete YTD Total Revenue?
Yes
No
Cancel

This variable is used in report.
Are you sure you want to delete it?

20) Click on the variable ***Revenue*** and click on ***Edit***.

21) Change ***Posting Amount*** in the *Formula Definition* to ***Pstng Amount.***


Variable Editor
Definition
Formula
Formulas
Definition
Formula
Formulas

```
=(<Posting Amount>*-1) Where (<Revenue flag>="Yes")
```

```
=(<Pstng Amount>*-1) Where (<Revenue flag>="Yes")
```

22) Repeat ***Steps 20*** and ***21*** for ***Transfers*** and ***Total Revenue***.

23) Edit the query and remove ***Posting Amount*** from the ***Result Objects Panel***.

24) Add ***Fund Type*** to the ***Result Objects Panel*** because your boss has requested that the report be ***Sectioned*** by ***Fund Type***.

25) ***Run*** the query using the same data for the **prompts** (**6** and **2008**).

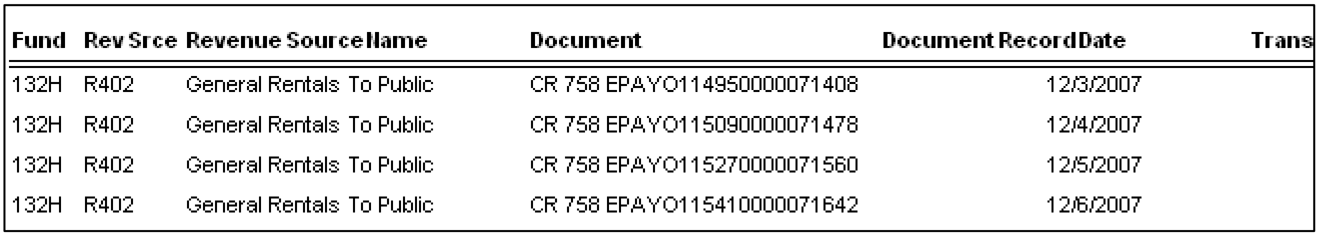
26) If ***Fund Type*** is added to the report, **delete** it from the table.

27) Click on ***Format > Breaks*** on the menu bar and ***Remove*** the ***Break*** on ***Fund*** and ***Revenue Source***.

28) Create a new ***Dimension* variable** called ***Document*** that will combine the ***Document Code***, ***Document Department Code***, and ***Document ID***.

=<Document Code>&" "&<Document Department Code>&" "&<Document ID>

29) In ***Structure View***, add the variable ***Document*** and ***Document Record Date*** next to the ***Revenue Source Name*** on the report.

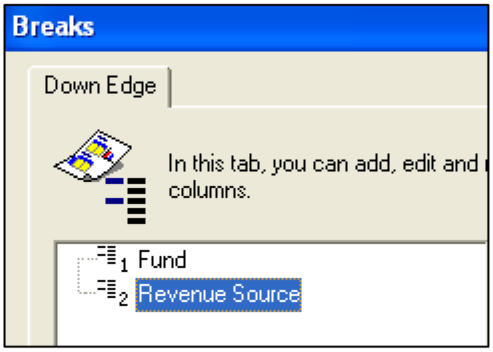


Fund	Rev Srce	Revenue Source Name	Document	Document Record Date	Trans
132H	R402	General Rentals To Public	CR 758 EPAYO114950000071408	12/3/2007	
132H	R402	General Rentals To Public	CR 758 EPAYO115090000071478	12/4/2007	
132H	R402	General Rentals To Public	CR 758 EPAYO115270000071560	12/5/2007	
132H	R402	General Rentals To Public	CR 758 EPAYO115410000071642	12/6/2007	

30) Create a ***Break*** on ***Fund***.

31) Create a ***Break*** on ***Revenue Source***.

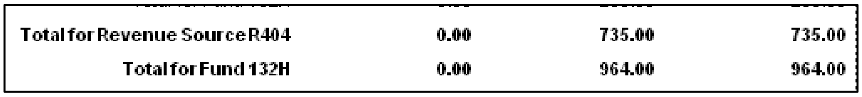
32) Insert ***Sums*** for each variable on the report.



In this tab, you can add, edit and
columns.

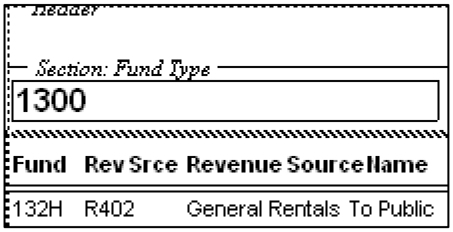
1 Fund
2 Revenue Source

33) Modify the ***Break Footers*** for ***Fund*** and ***Revenue Source*** so that they contain formulas that will change with each *Fund* and *Revenue Source* that say "*Total for Fund….*" or "*Total for Revenue Source….*".



Total for Revenue Source R404	0.00	735.00	735.00
Total for Fund 132H	0.00	964.00	964.00

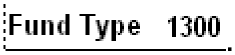
34) Create a ***Section*** on ***Fund Type*** by dragging ***Fund Type*** above the table from the ***Report Manager***.



1300

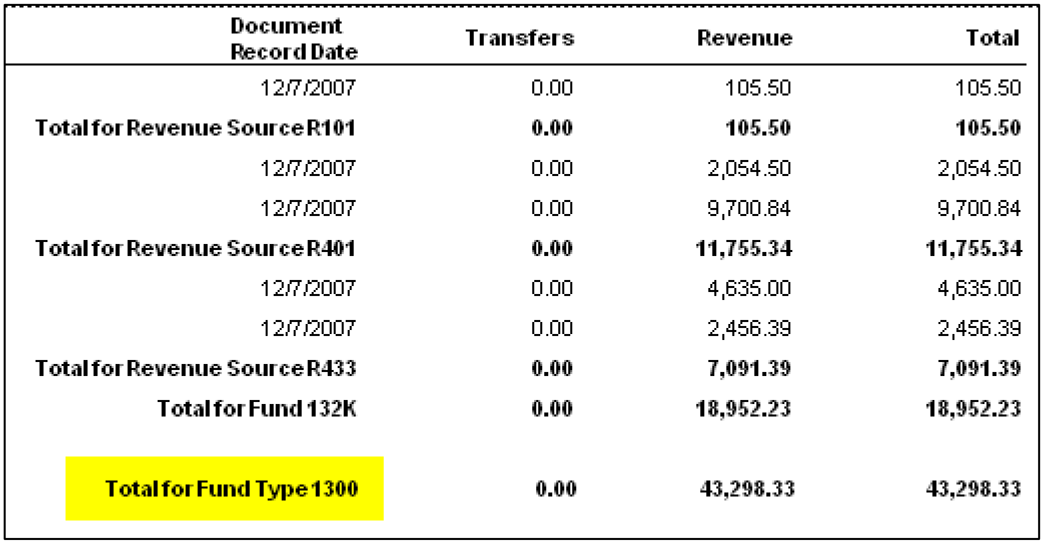
Fund	Rev Srce	Revenue Source Name
132H	R402	General Rentals To Public

35) Insert a ***Blank Cell*** in front of ***Fund Type*** and type "***Fund Type***" in the cell



Fund Type 1300

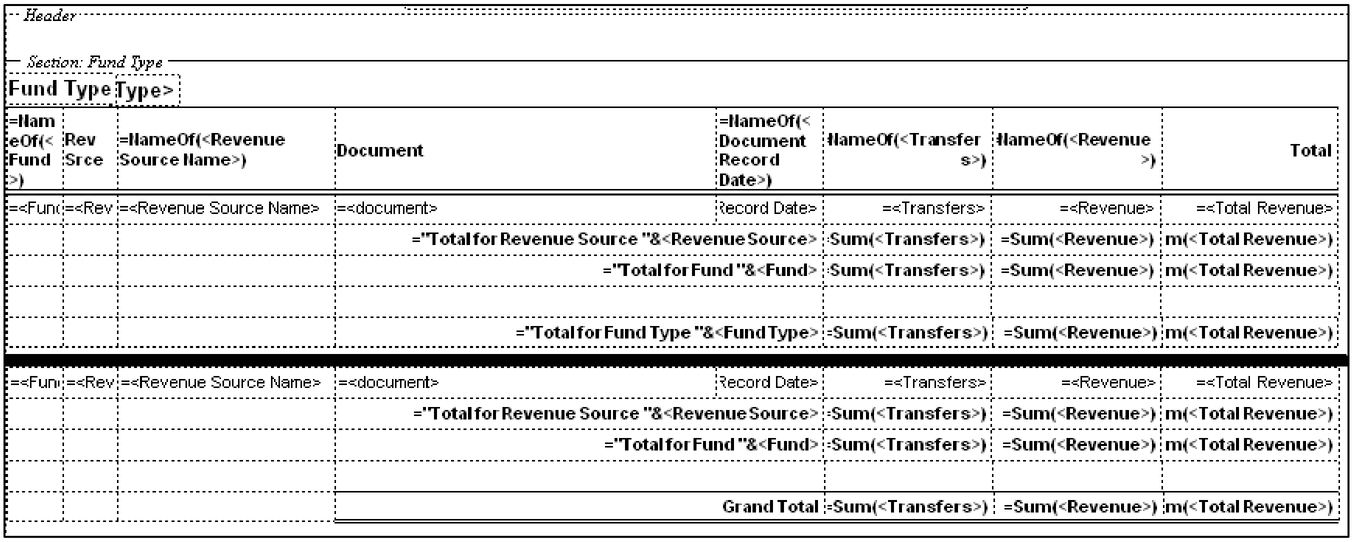
36) In the grand total row of the table, modify it to show the total for the ***Fund Type***.



Document Record Date	Transfers	Revenue	Total
12/7/2007	0.00	105.50	105.50
Total for Revenue Source R101	**0.00**	**105.50**	**105.50**
12/7/2007	0.00	2,054.50	2,054.50
12/7/2007	0.00	9,700.84	9,700.84
Total for Revenue Source R401	**0.00**	**11,755.34**	**11,755.34**
12/7/2007	0.00	4,635.00	4,635.00
12/7/2007	0.00	2,456.39	2,456.39
Total for Revenue Source R433	**0.00**	**7,091.39**	**7,091.39**
Total for Fund 132K	**0.00**	**18,952.23**	**18,952.23**
Total for Fund Type 1300	**0.00**	**43,298.33**	**43,298.33**

37) Copy the **table** into the ***Main Report Section Footer*** so that a *Grand Total* for the entire report may be shown.

38) Hide the table ***Header***, show the ***Footer*** and hide the table **detail** (***Fold***).

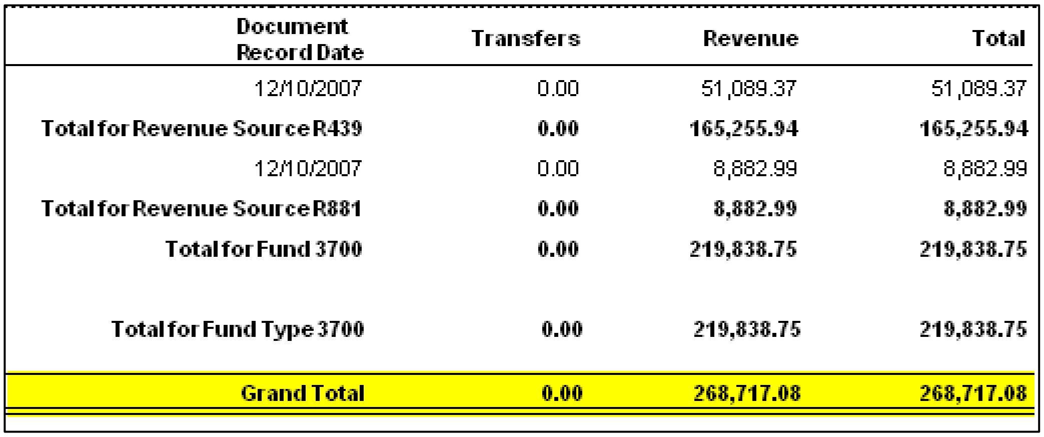


Header

Section: Fund Type

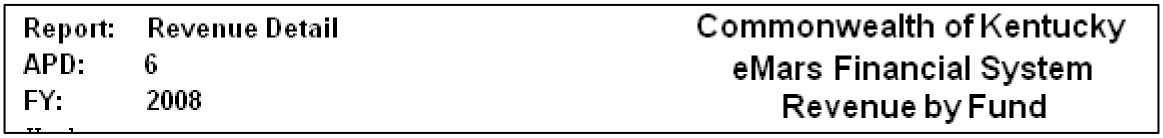
Fund Type Type>

=NameOf(<Fund>)	Rev Srce	=NameOf(<Revenue Source Name>)	Document	=NameOf(<Document Record Date>)	NameOf(<Transfers>)	NameOf(<Revenue>)	Total
=<Fun	=<Rev	=<Revenue Source Name>	=<document>	Record Date>	=<Transfers>	=<Revenue>	=<Total Revenue>
			="Total for Revenue Source "&<Revenue Source>		Sum(<Transfers>)	=Sum(<Revenue>)	m(<Total Revenue>)
			="Total for Fund "&<Fund>		Sum(<Transfers>)	=Sum(<Revenue>)	m(<Total Revenue>)
			="Total for Fund Type "&<Fund Type>		=Sum(<Transfers>)	=Sum(<Revenue>)	m(<Total Revenue>)
=<Fun	=<Rev	=<Revenue Source Name>	=<document>	Record Date>	=<Transfers>	=<Revenue>	=<Total Revenue>
			="Total for Revenue Source "&<Revenue Source>		Sum(<Transfers>)	=Sum(<Revenue>)	m(<Total Revenue>)
			="Total for Fund "&<Fund>		Sum(<Transfers>)	=Sum(<Revenue>)	m(<Total Revenue>)
			Grand Total		=Sum(<Transfers>)	=Sum(<Revenue>)	m(<Total Revenue>)



	Document Record Date	Transfers	Revenue	Total
	12/10/2007	0.00	51,089.37	51,089.37
Total for Revenue Source R439		**0.00**	**165,255.94**	**165,255.94**
	12/10/2007	0.00	8,882.99	8,882.99
Total for Revenue Source R881		**0.00**	**8,882.99**	**8,882.99**
Total for Fund 3700		**0.00**	**219,838.75**	**219,838.75**
Total for Fund Type 3700		**0.00**	**219,838.75**	**219,838.75**
Grand Total		**0.00**	**268,717.08**	**268,717.08**

39) Change the **report title** to reflect a new name for the report.



Report: Revenue Detail
APD: 6
FY: 2008

Commonwealth of Kentucky
eMars Financial System
Revenue by Fund

40) ***Save*** the report and ***Send*** it to your **eMARS ID** if you wish to use it at a later date.

Appendices

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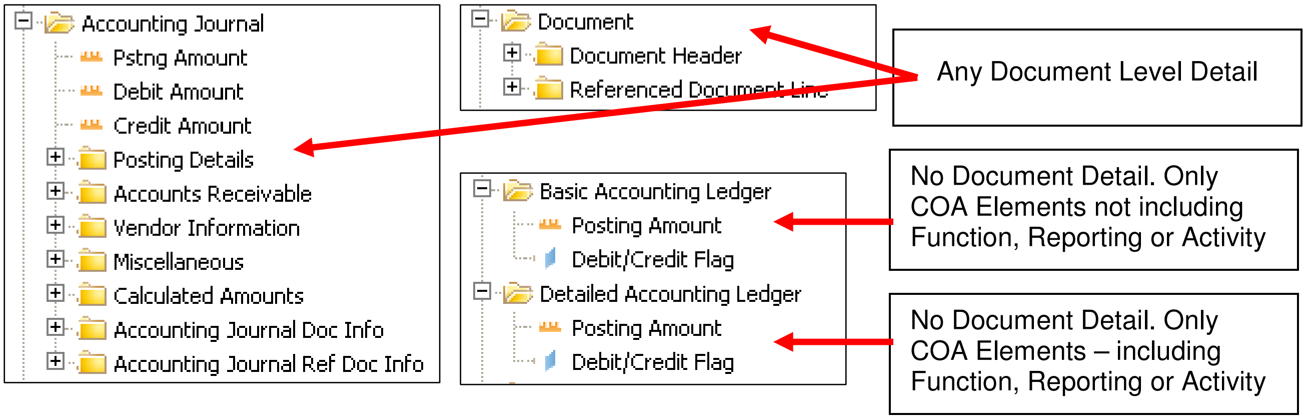
Appendix A
Document Catalog vs. Accounting Journal vs. Summary Ledgers

Document Catalog
Summary Ledgers
Accounting Journal

Knowing where to pull data from is vital to report performance.



- Accounting Journal
  - Pstng Amount
  - Debit Amount
  - Credit Amount
  - Posting Details
  - Accounts Receivable
  - Vendor Information
  - Miscellaneous
  - Calculated Amounts
  - Accounting Journal Doc Info
  - Accounting Journal Ref Doc Info

- Document
  - Document Header
  - Referenced Document Line

- Basic Accounting Ledger
  - Posting Amount
  - Debit/Credit Flag
- Detailed Accounting Ledger
  - Posting Amount
  - Debit/Credit Flag

Any Document Level Detail

No Document Detail. Only COA Elements not including Function, Reporting or Activity

No Document Detail. Only COA Elements – including Function, Reporting or Activity

Pulling *Dimension, Detail* or *Measure Objects* from the wrong classes can cause reports to run longer than they have to. It is important to understand the major *Classes* (*Folders*) within the *General Accounting Universe* in order to properly build your reports.

Classes within a *Universe* contain objects that represent data in a table *behind the scenes.* Two of the largest tables in the *General Accounting Universe* that require our attention are the ***FACT_DOC_HDR*** table, which the *Document Class* references, and the ***FACT_JRNL_ACTG*** table, which the *Accounting Journal Class* references. Keep in mind that there are many tables referenced *behind the scenes* in a *Universe*, but the two tables previously mentioned are by far the largest because they contain document level detail.

The summary ledgers: ***SMRY_LDGRA*** and ***SMRY_LDGRB***; are referenced by the *Basic Accounting Ledger* and the *Detailed Accounting Ledger*. The summary ledger utilized in the SQL of the query depends entirely on *Dimension Objects* used in your query. A list of acceptable objects to use when reporting from the summary ledgers may be found at the end of this document.

Rule of thumb for deciding where to pull *Dimension, Detail* or *Measure Objects* is as such:

1. If you need document level detail, *always* start with the *Accounting Journal Class*.
    a. Pull all *Objects* from the class including *Posting Details,* such as *Document Record Date,* and referenced documents, found in *Accounting Journal Ref Doc Info*.
    b. If you use *Accounting Journal Class,* only pull objects from the *Document Class* when absolutely necessary for your reporting needs.
    c. *Do not* pull *Posting Amount* from either *Basic* or *Detailed Accounting Ledger,* instead pull *Pstng Amount* from the *Accounting Journal Class*.
2. If you must use the *Document Class*, do not use the *Accounting Journal Class* unless it is absolutely necessary (i.e. you need elements that are not in the *Document Class*)
3. If you *do not need* document level detail or any of the *Dimension, Detail* or *Measure Objects* found in the *Accounting Journal Class* or *Document Class*, pull *Posting Amount* from one of the *Accounting Ledger Classes*; because, summary ledgers only contain rollup information.

Summary Ledgers

Business Objects/infoAdvantage will decide the appropriate summary ledger to pull data from (*SMRY_LDGRA* or *SMRY_LDGRB*) depending on the *Objects* you use in your query. If you need a report that shows document level detail, you have to use either the *Accounting Journal Class* or the *Document Class.* However, if you do not need document level detail, you may use either the *Basic* or *Detailed Accounting Ledger* to pull *Posting Amount*.

If you decide you do not need document level detail and use *Posting Amount* from either the *Basic* or *Detailed Accounting Ledger Class,* you need to make sure you only use *Dimension Objects* and their corresponding *Detail Objects* in your query that are listed in this document.

Basic Accounting Ledger **or** ***Detailed Accounting Ledger***

Budget Fiscal Year > ***BFY***

Fiscal Year > ***Fiscal Year***

Accounting Period > ***Accounting Period***
Accounting Period > ***Fiscal Year***
Accounting Period > ***Fiscal Quarter***

COA-Fund Accounting > Fund > ***Fund***
COA-Fund Accounting > Fund > ***Sub-Fund***
COA-Fund Accounting > Fund > ***Close into Account***
COA-Fund Accounting > Fund > ***Capital Asset Fund***
COA-Fund Accounting > Fund > ***Responsibility Center Posting Flag***
COA-Fund Accounting > Fund > ***Ovrd Responsibility Ctr Post Flag***
COA-Fund Accounting > Fund > ***Master Bank Account***
COA-Fund Accounting > Fund Hierarchy > ***Fund Class***
COA-Fund Accounting > Fund Hierarchy > ***Fund Category***
COA-Fund Accounting > Fund Hierarchy > ***Fund Type***
COA-Fund Accounting > Fund Hierarchy > ***Fund Group***
COA-Fund Accounting > CAFR Fund > ***CAFR Fund Type***
COA-Fund Accounting > CAFR Fund > ***CAFR Fund Group***
COA-Fund Accounting > CAFR Fund > ***Major Fund***

COA-Fund Accounting > CAFR Fund > ***Component Unit***
COA-Fund Accounting > Object > ***Object***
COA-Fund Accounting > Object > ***Sub-Object***
COA-Fund Accounting > Object > Object Hierarchy > ***Object Class***
COA-Fund Accounting > Object > Object Hierarchy > ***Object Category***
COA-Fund Accounting > Object > Object Hierarchy > ***Object Type***
COA-Fund Accounting > Object > Object Hierarchy > ***Object Group***
COA-Fund Accounting > Object > CAFR Expense Type > ***Major CAFR Expense Type***
COA-Fund Accounting > Object > CAFR Expense Type > ***Minor CAFR Expense Type***
COA-Fund Accounting > Object > Object Indicators > ***Reimbursable Flag***
COA-Fund Accounting > Object > Object Indicators > ***Reimbursable Eligible Flag***
COA-Fund Accounting > Object > Object Indicators > ***FASB Class***
COA-Fund Accounting > Object > Object Indicators > ***Operational Flag***
COA-Fund Accounting > Object > Object Indicators > ***Payroll Flag***
COA-Fund Accounting > Object > Object Indicators > ***Intercept Flag***
COA-Fund Accounting > Object > Object Indicators > ***1099 Income Code***
COA-Fund Accounting > Object > Object Indicators > ***Sub-object 1099 Income Code***

COA-Fund Accounting > Revenue > ***Revenue Source***
COA-Fund Accounting > Revenue > ***Sub-Revenue Source***
COA-Fund Accounting > Revenue > ***Revenue Source FASB Code***
COA-Fund Accounting > Revenue Source Hierarchy > ***Revenue Source Class***
COA-Fund Accounting > Revenue Source Hierarchy > ***Revenue Source Category***
COA-Fund Accounting > Revenue Source Hierarchy > ***Revenue Source Type***
COA-Fund Accounting > Revenue Source Hierarchy > ***Revenue Source Group***
COA-Fund Accounting > CAFR Revenue > ***Major CAFR Revenue Type***
COA-Fund Accounting > CAFR Revenue > ***Minor CAFR Revenue Type***
COA-Fund Accounting > Balance Sheet Account > ***BSA***
COA-Fund Accounting > Balance Sheet Account > ***Sub-BSA***
COA-Fund Accounting > Balance Sheet Account > ***BSA Account Type***
COA-Fund Accounting > Balance Sheet Account > ***Offset BSA***
COA-Fund Accounting > Balance Sheet Account > ***Sub-Offset BSA***
COA-Fund Accounting > Balance Sheet Account > BSA Hierarchy > ***BSA Class***
COA-Fund Accounting > Balance Sheet Account > BSA Hierarchy > ***BSA Category***
COA-Fund Accounting > Balance Sheet Account > BSA Hierarchy > ***BSA Type***
COA-Fund Accounting > Balance Sheet Account > BSA Hierarchy > ***BSA Group***
COA-Fund Accounting > Balance Sheet Account > CAFR BSA > ***Major CAFR BSA Group***
COA-Fund Accounting > Balance Sheet Account > CAFR BSA > ***Minor CAFR BSA Group***
COA-Fund Accounting > Balance Sheet Account > BSA Indicators > ***1099 Type of Income***
COA-Fund Accounting > Balance Sheet Account > BSA Indicators > ***BSA FASB Class***
COA-Fund Accounting > Balance Sheet Account > BSA Indicators > ***BSA Memo Account***
COA-Fund Accounting > Balance Sheet Account > BSA Indicators > ***BSA Cash Account***
COA-Fund Accounting > Balance Sheet Account > BSA Indicators > ***BSA Payroll Account***

COA-Fund Accounting > Department Object > ***Department Object***
COA-Fund Accounting > Department Object Hierarchy > ***Dept Object Class***
COA-Fund Accounting > Department Object Hierarchy > ***Dept Object Category***
COA-Fund Accounting > Department Object Hierarchy > ***Dept Object Type***
COA-Fund Accounting > Department Object Hierarchy > ***Dept Object Group***

COA-Fund Accounting > Department Revenue > ***Dept Revenue Source***
COA-Fund Accounting > Department Revenue Source Hierarchy > ***Dept Revenue Source Class***
COA-Fund Accounting > Department Revenue Source Hierarchy > ***Dept Revenue Source Category***
COA-Fund Accounting > Department Revenue Source Hierarchy > ***Dept Revenue Source Type***
COA-Fund Accounting > Department Revenue Source Hierarchy > ***Dept Revenue Source Group***

COA-Organization > Organization-Centralized View > ***Government Branch***
COA-Organization > Organization-Centralized View > ***Cabinet***
COA-Organization > Organization-Centralized View > ***Department***

COA-Organization > Organization-Decentralized View > ***Division***
COA-Organization > Organization-Decentralized View > ***Group***
COA-Organization > Organization-Decentralized View > ***Section***
COA-Organization > Organization-Decentralized View > ***District***
COA-Organization > Organization-Decentralized View > ***Bureau***
COA-Organization > Organization-Decentralized View > ***Unit***
COA-Organization > Organization-Decentralized View > ***Sub-Unit***

COA-Organization > Flex Reporting > ***Flex Reporting 1***
COA-Organization > Flex Reporting > ***Flex Reporting 2***
COA-Organization > Flex Reporting > ***Flex Reporting 3***
COA-Organization > Flex Reporting > ***Flex Reporting 4***
COA-Organization > Flex Reporting > ***Flex Reporting 5***

COA-Budgeting > Appropriation > ***Appropriation***
COA-Budgeting > Appropriation > ***Appropriation Classification***
COA-Budgeting > Appropriation > Appropriation Hierarchy > ***Appropriation Class***
COA-Budgeting > Appropriation > Appropriation Hierarchy > ***Appropriation Category***
COA-Budgeting > Appropriation > Appropriation Hierarchy > ***Appropriation Type***
COA-Budgeting > Appropriation > Appropriation Hierarchy > ***Appropriation Group***

Posting Code > ***Posting Code***
Posting Code > ***Closing Classification***
Posting Code > Update/Posting Rules > ***CBAL Update***
Posting Code > Update/Posting Rules > ***FBAL Update***
Posting Code > Update/Posting Rules > ***Expense Budget***
Posting Code > Update/Posting Rules > ***Expense Bucket ID***
Posting Code > Update/Posting Rules > ***Revenue Budget***
Posting Code > Update/Posting Rules > ***Revenue Bucket ID***
Posting Code > Update/Posting Rules > ***Code Type***
Posting Code > Classifications > ***Overhead Process***
Posting Code > Classifications > ***Cost Allocation Process***
Posting Code > Classifications > ***Funding Split***

Detailed Accounting Ledger

COA-Detailed Accounting > Activity > ***Activity***
COA-Detailed Accounting > Activity > ***Sub-Activity***
COA-Detailed Accounting > Activity Hierarchy > ***Activity Class***
COA-Detailed Accounting > Activity Hierarchy > ***Activity Category***
COA-Detailed Accounting > Activity Hierarchy > ***Activity Type***
COA-Detailed Accounting > Activity Hierarchy > ***Activity Group***
COA-Detailed Accounting > CAFR Activity > ***CAFR Activity Unit***
COA-Detailed Accounting > CAFR Activity > ***Major CAFR Activity***
COA-Detailed Accounting > CAFR Activity > ***Minor CAFR Activity***

COA-Detailed Accounting > Function > ***Function***
COA-Detailed Accounting > Function > ***Sub-Function***
COA-Detailed Accounting > Function Hierarchy > ***Function Class***
COA-Detailed Accounting > Function Hierarchy > ***Function Category***
COA-Detailed Accounting > Function Hierarchy > ***Function Type***
COA-Detailed Accounting > Function Hierarchy > ***Function Group***

COA-Detailed Accounting > Reporting > ***Reporting***
COA-Detailed Accounting > Reporting > ***Sub-Reporting***
COA-Detailed Accounting > Reporting Hierarchy > ***Reporting Class***
COA-Detailed Accounting > Reporting Hierarchy > ***Reporting Category***
COA-Detailed Accounting > Reporting Hierarchy > ***Reporting Type***
COA-Detailed Accounting > Reporting Hierarchy > ***Reporting Group***

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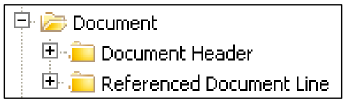
Appendix B
Duplicate Document Issue Workaround

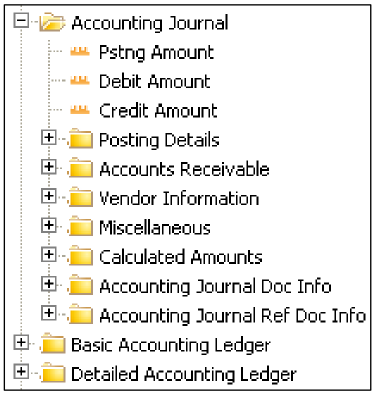
When developing a report, depending on where document information is being pulled from, report developers need to start carefully analyzing the need for utilizing the *Duplicate Rows* and *No Duplicate Rows* options in infoAdvantage Webi or Business Objects Desktop Intelligence.

The simplest approach to determining which option should be selected lies in where you pull the document information. For example, in the *General Accounting Universe*,

a) If any *Dimension Objects* are pulled from the *Document Class,* do not return duplicate rows.


Document
- Document Header
- Referenced Document Line

b) If any *Dimension Objects* are pulled from the *Accounting Journal Class*, return duplicate rows.


Accounting Journal
- Pstng Amount
- Debit Amount
- Credit Amount
- Posting Details
- Accounts Receivable
- Vendor Information
- Miscellaneous
- Calculated Amounts
- Accounting Journal Doc Info
- Accounting Journal Ref Doc Info

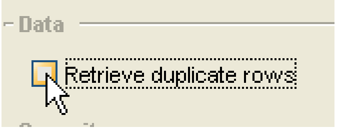
Basic Accounting Ledger

Detailed Accounting Ledger

c) *Dimension Objects* **cannot** be pulled from both the *Document Class* and the *Accounting Journal Class* if the option *No Duplicate Rows* is selected.

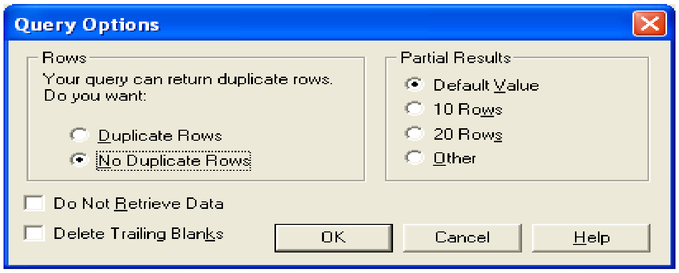
If you select *Dimension Objects* from the *Document Class*, below are screen shots of the option you should select in either infoAdvantage Webi or Business Objects Desktop Intelligence.

Webi


Data

☐ Retrieve duplicate rows

Desktop Intelligence


Query Options

Rows

Your query can return duplicate rows. Do you want:

○ Duplicate Rows

● No Duplicate Rows

Partial Results

● Default Value

○ 10 Rows

○ 20 Rows

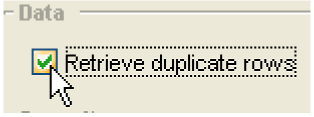
○ Other

☐ Do Not Retrieve Data

☐ Delete Trailing Blanks

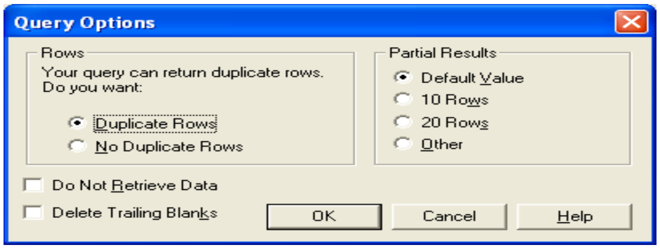
If you select *Dimension Objects* from the *Accounting Journal Class*, below are screen shots of the option you should select in either infoAdvantage Webi or Business Objects Desktop Intelligence.

Webi


Data

☑ Retrieve duplicate rows

Desktop Intelligence


Query Options

Rows

Your query can return duplicate rows. Do you want:

● Duplicate Rows

○ No Duplicate Rows

Partial Results

● Default Value

○ 10 Rows

○ 20 Rows

○ Other

☐ Do Not Retrieve Data

☐ Delete Trailing Blanks

As for other universes, the key to deciding the correct option is to build your report, run it and verify that the data matches back to *eMARS Financial*. If you notice that your results are doubled or quadrupled, you should go back into your query and choose to not return duplicate rows. If this option does not solve your problem, it is possible that there is something else that needs to be changed in the query. At that point, you should contact the CRC via email for assistance.

Appendix C
Purging Data from Reports Prior to Saving/Publishing

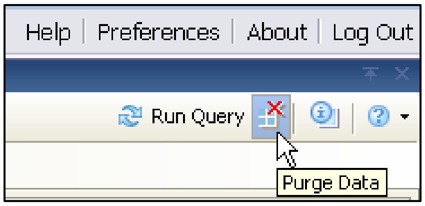
Purging data from a report prior to saving to *Personal Documents* or *Corporate Documents* is important when developing reports for personal use or for use by others within your cabinet or department.

Purging is an action that deletes or removes the data returned by the query or queries from the report; however, the report structure (reports, tables, charts, etc.) and formatting is retained. You can run the query later to return the up to date values from the universe (data warehouse). Purging the report enables you to minimize the size of the report; thus, minimizing the space used in the repository, which is a centralized location that stores resources needed for reporting, including reports stored in *Inbox, Personal,* or *Corporate Documents*..

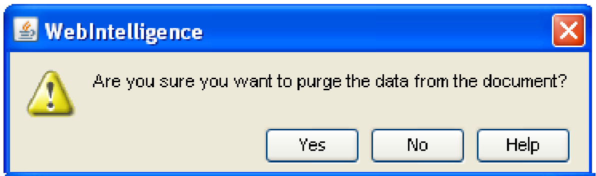
To save space on the repository, it is important that historical data is not stored in reports in either *Personal* or *Corporate Documents* in *infoAdvantage*. If historical data is needed for reporting purposes at a later date, reports should be saved to a personal drive or shared network folder as a PDF file. Users may open existing reports with saved data, purge the report, and resave to *Personal* or *Corporate Documents* after they have exported to a PDF format.

Instructions for exporting reports can be found at http://finance.ky.gov/internal/eMARS/reports.htm under the link infoAdvantage Enhanced Document Format.

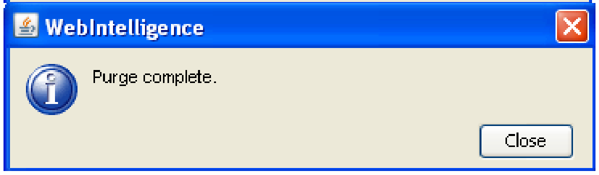
To purge data from a report in *infoAdvantage (Webi)*, click on the *Purge Data* button, in the top right hand corner, in the *Report Panel*.


Help
Preferences
About
Log Out
Run Query
Purge Data

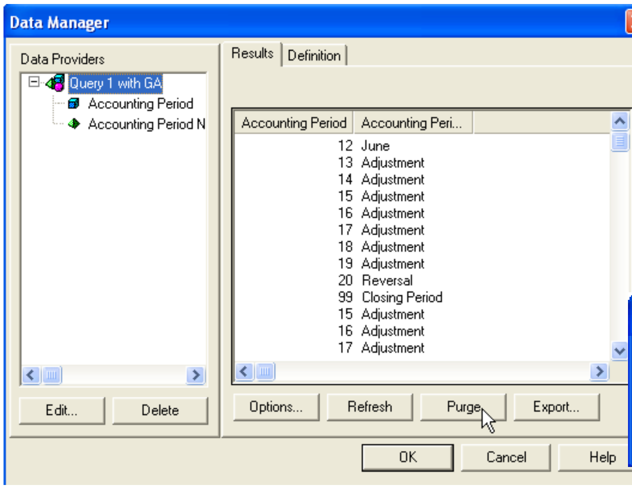
When *Purge Data* is clicked, you will be asked *"Are you sure you want to purge the data from the document?"* Click *Yes* to purge the data from the report. The report may then be saved to *Personal* or *Corporate Documents.*


WebIntelligence
Yes
No
Help

Are you sure you want to purge the data from the document?


WebIntelligence
Close

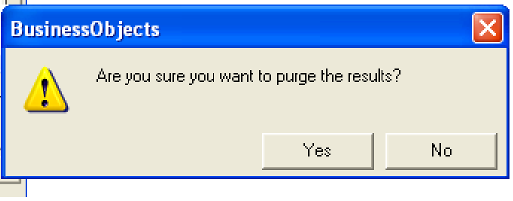
Purge complete.


Data Manager
Data Providers
Query 1 with GA
Accounting Period
Accounting Period N
Results
Definition
Edit...
Delete
Options...
Refresh
Purge
Export...
OK
Cancel
Help

Accounting Period	Accounting Peri...
12	June
13	Adjustment
14	Adjustment
15	Adjustment
16	Adjustment
17	Adjustment
18	Adjustment
19	Adjustment
20	Reversal
99	Closing Period
15	Adjustment
16	Adjustment
17	Adjustment

To purge data from a report in Desktop Intelligence; first select the query or data provider to purge, and then click on *Purge*.

Click *Yes* when *Business Objects* ask *"Are you sure you want to purge the results?"*


BusinessObjects
Yes
No

Are you sure you want to purge the results?

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Appendix D
Deletion of Inbox Documents

All users who utilize the infoAdvantage (*Webi*) or Desktop Intelligence reporting tools are required to purge data from all reports they have created and are currently storing in infoAdvantage. This includes those reports stored under the links for *Shared, Personal and Inbox Documents*. Statewide Accounting Services (SAS) has been alerted that the report storage has become increasingly large. As a result, to help with the storage space issue, SAS has implemented the following:

- SAS will **delete** reports from users' ***Inbox Documents*** on the first business day of each month that are **older than 30 days.**
- **ONLY INBOX DOCUMENTS WILL AUTOMATICALLY BE DELETED.**
- CRC will post an alert and send out a notice at least one week prior to the deletion of reports in all user's *Inbox Documents* that are 30 days or older. Users will be responsible for saving reports from their *Inbox Documents* to their *Personal Documents* if they wish to obtain the report for future use. Users will be expected to purge data from the report if they wish to save a copy of the report.

IMPORTANT NOTE: Once reports have been deleted from Inbox Documents they can not be restored.

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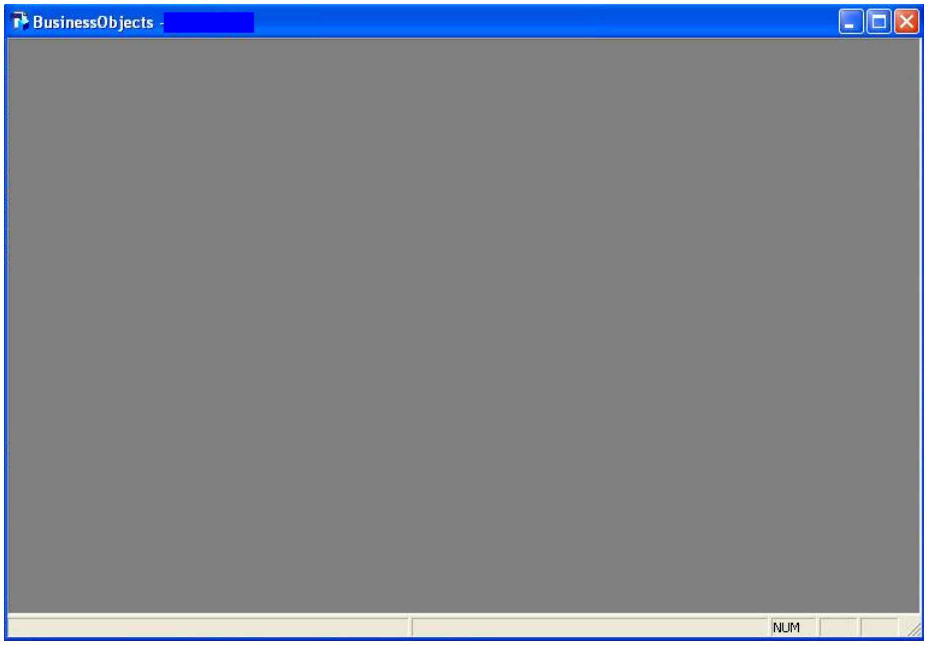
Appendix E
Desktop Intelligence Menu Bar Restoration

If your Business Objects Desktop Intelligence Menu Bar has ever disappeared with no explanation, there is now a way to restore the menu bar.


BusinessObjects - [redacted]
NUM

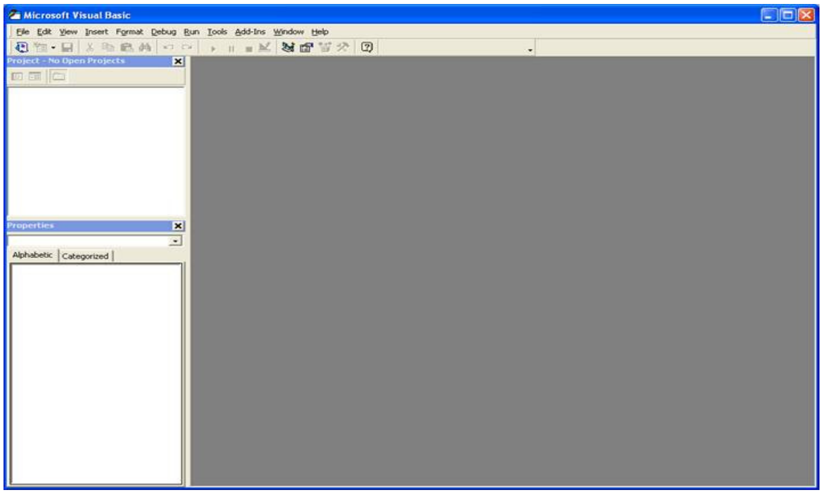
However, after testing, it appears that this is a temporary fix and the restoration is only valid while you are logged into Desktop Intelligence. Steps to restore the menu bar would have to be performed each time a user logs into Desktop Intelligence.

Until further notice, users may apply the steps to restore the menu bar each time they log into Desktop Intelligence or they may contact their technical support and have Desktop Intelligence uninstalled and reinstalled.

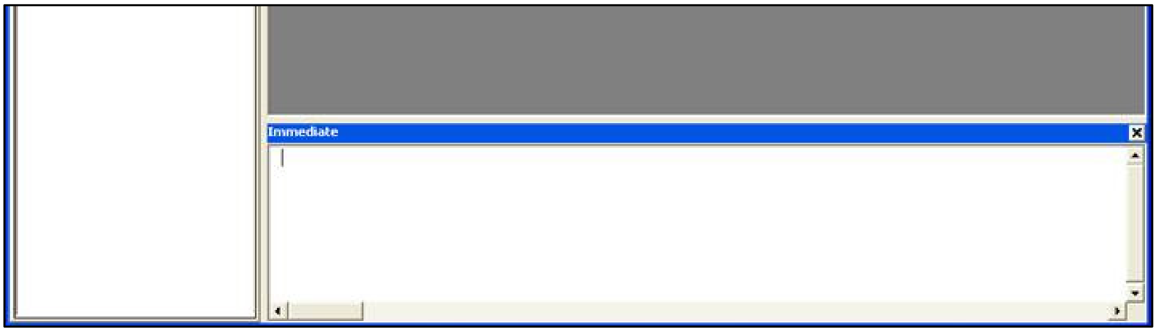
The *CGI infoAdvantage Newsletter: AMS Advantage Program 2007* provided steps to restoring the menu bar but did not give explanation as to why this may occur. Below are the steps to restore the Menu bar in Business Objects if it has disappeared.

1. Login to **Desktop Intelligence**.

2. When it is open, **Press Alt +F11** to activate the VBA Window.

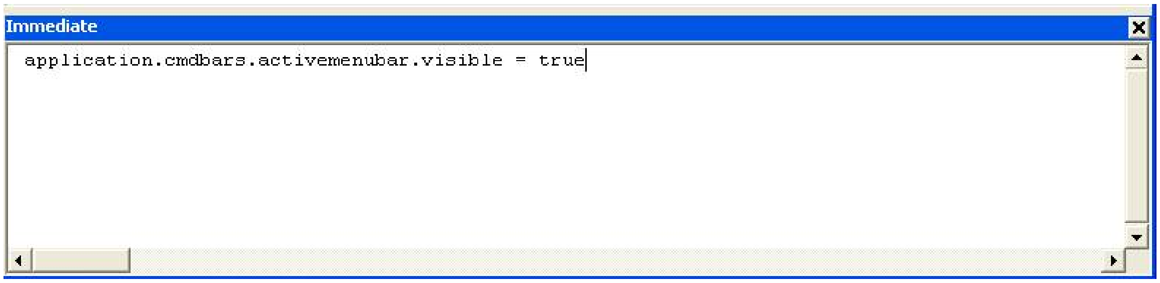

Microsoft Visual Basic
File Edit View Insert Format Debug Run Tools Add-Ins Window Help
Project - No Open Projects
Properties
Alphabetic
Categorized

3. Press **CTRL + G** for the "Immediate Window" if it is not already open.



4. Type, or copy and paste, the following line into the "Immediate Window":

   application.cmdbars.activemenubar.visible = true

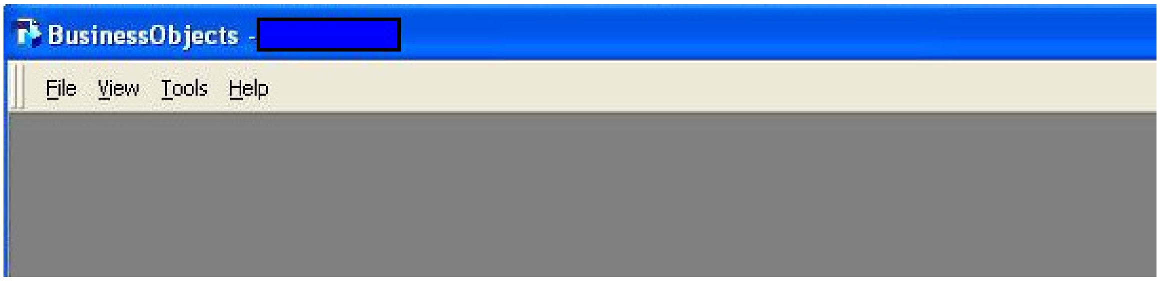


```
application.cmdbars.activemenubar.visible = true
```

5. Hit **Enter**.

6. Close the **VBA Window**.

The menu bar should be visible in Desktop Intelligence. However, once you close Desktop Intelligence and log back in, the menu bar may no longer be visible.


BusinessObjects - [redacted]
File
View
Tools
Help

Appendix F
Primary Verses Kernal Universes

The following is a list of *Universes* that are available in *eMars infoAdvantage*.
Universes marked as ***KERNEL*** in the list below should not be used for reporting.
Universes marked as ***PRIMARY*** should and will be used for reporting.

Primary Universes will contain one or several *Kernel Universes*. This design allows developers to update a *Kernel Universe* and have the changes reflected in all the *Primary Universes*.

PRIMARY UNIVERSES

- Accounting Template and Profile
- Accouns Payable
- Accounts Payable – Kentucky
- Accounts Payable Open Items
- Accounts Receivable
- Budget Execution Universe – KY
- Cingular
- Commodity Journal Universe
- Cost Accounting
- Document Phase Universe – KY
- **ePay***
- Fixed Assets
- General Accounting
- Inventory
- KY Capital Projects
- KY Cost Accounting
- KY TempFYDAD
- KY YE Cash
- KY – COA
- **PER***
- PCARD_DTL
- Proc Solicitation Lifecycle Univ
- Procurement Card
- Procurement Awards Universe
- Procurement Folder Universe
- Procurement Matching Status
- Procurement Post Awards Universe
- Procurement Requisitions Universe
- Proof of Necessity
- Security and Workflow
- Travel Accounting
- Vendor ABA

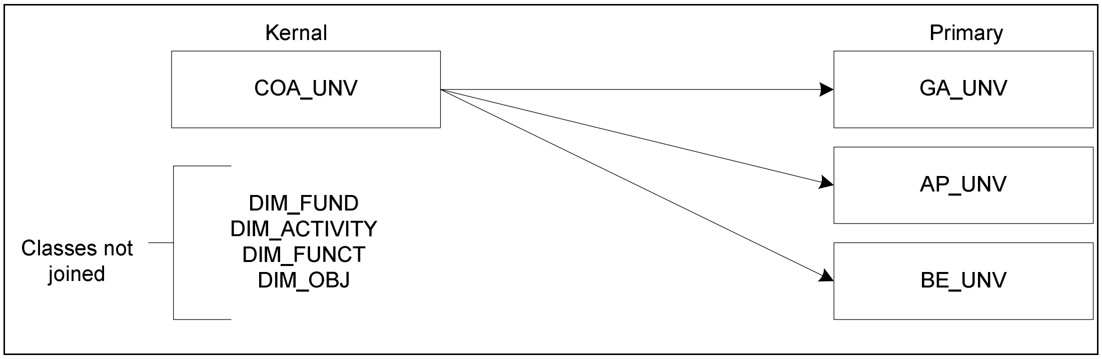
NOTE: Highlighted *Primary Universes* are custom built *Kentucky Universes. ePAY* and *PER Universes* require additional security in order to access data stored in the *Universes*.

KERNEL UNIVERSES

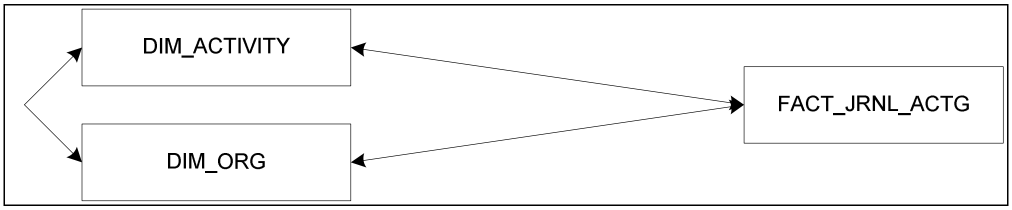
- Accounting Journal Universe
- Chart of Accounts
- Commodity Universe
- Common Reference Universe
- Document Catalog
- Geographic Location
- Procurement Reference Info Universe
- Time Universe
- Vendor

Kernal Universes:

Mini *Universes*
Not set up with relationships
Created because they will be used in *Primary Universes*
Changes in *Kernals* are referenced in *Primaries*


Kernal
Primary
COA_UNV
GA_UNV
AP_UNV
BE_UNV
DIM_FUND
DIM_ACTIVITY
DIM_FUNCT
DIM_OBJ
Classes not joined

In the figure above, the *Kernal Chart of Accounts Universe (COA_UNV)*, you may see that the classes within the universe are not joined together. When the *Chart of Accounts Universe* is joined to the *Primary Universes*, each class in *Chart of Accounts* is joined to a *FACT* table in one of the *Primary Universes*.


DIM_ACTIVITY
DIM_ORG
FACT_JRNL_ACTG

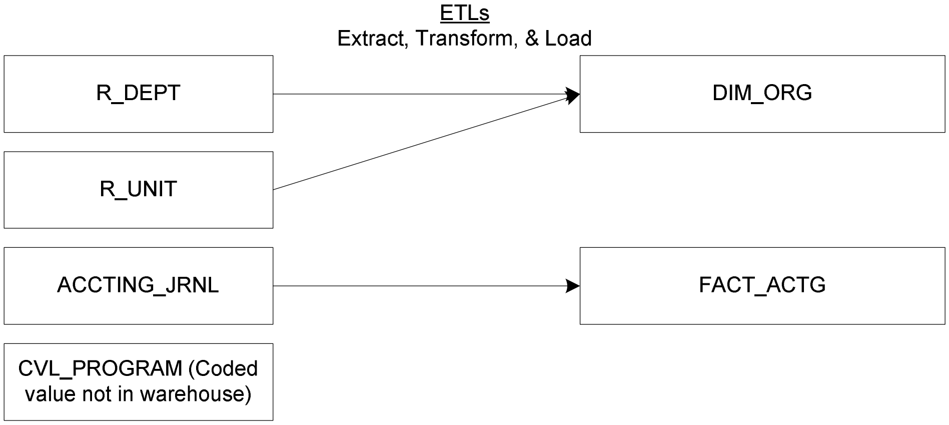
If the classes within the *Chart of Accounts Universe* were joined, an infinite loop would be created. In the figure above, the classes are show joined together but also joined to a fact table. If this were to happen in infoAdvantage a loop would be created that would look something like

Fact to *Activity* to *Org* to *Fact* to *Activity* to *Org*….etc

Fact to *Org* to *Activity* to *Fact* to *Org* to *Activity*….etc

Org to *Activity* to *Fact* to *Org* to *Activity* to *Fact*….etc

Etc…

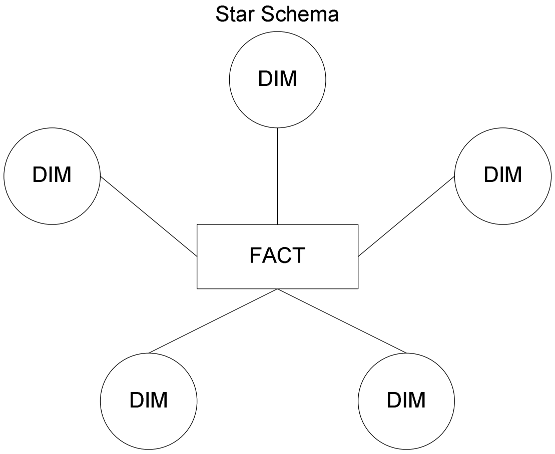

ETLs
Extract, Transform, & Load
R_DEPT
R_UNIT
ACCTING_JRNL
CVL_PROGRAM (Coded value not in warehouse)
DIM_ORG
FACT_ACTG

R_ = *Reference Table* in *Financial Database*

CVL_ = *Coded Values Table* in *Financial Database* – Not in *Reporting Database*

FACT = *Primary Table* in *Reporting Database* (Links to *DIM* tables)

DIM = *Reference Table* in *Reporting Database*


Star Schema
DIM
DIM
DIM
FACT
DIM
DIM

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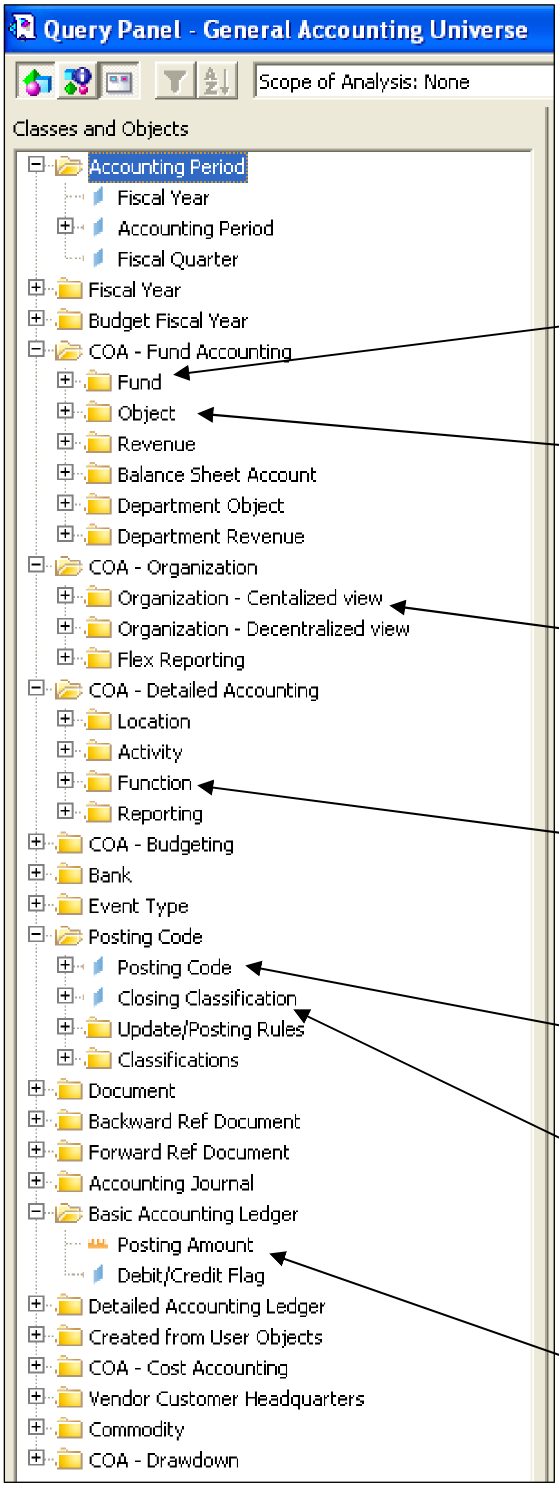
Appendix G
Universes Tips



Query Panel - General Accounting Universe

Scope of Analysis: None

Classes and Objects

- Accounting Period
  - Fiscal Year
  - Accounting Period
  - Fiscal Quarter
- Fiscal Year
- Budget Fiscal Year
- COA - Fund Accounting
  - Fund
  - Object
  - Revenue
  - Balance Sheet Account
  - Department Object
  - Department Revenue
- COA - Organization
  - Organization - Centalized view
  - Organization - Decentralized view
  - Flex Reporting
- COA - Detailed Accounting
  - Location
  - Activity
  - Function
  - Reporting
- COA - Budgeting
- Bank
- Event Type
- Posting Code
  - Posting Code
  - Closing Classification
  - Update/Posting Rules
  - Classifications
- Document
- Backward Ref Document
- Forward Ref Document
- Accounting Journal
- Basic Accounting Ledger
  - Posting Amount
  - Debit/Credit Flag
- Detailed Accounting Ledger
- Created from User Objects
- COA - Cost Accounting
- Vendor Customer Headquarters
- Commodity
- COA - Drawdown

Within Fund, expand CAFR Fund and select CAFR Fund Type to get General, Restricted, etc.

Within Object, expand Object Hierarchy and select Object Type to get Personnel, Operating, etc.

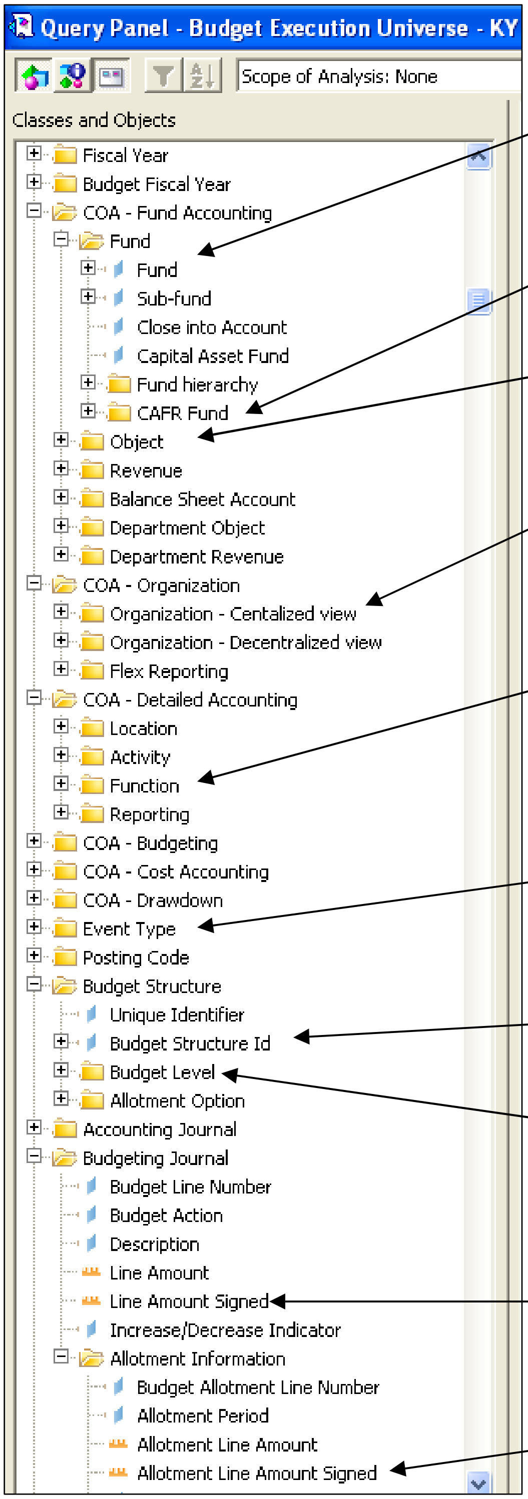
Cabinet and Department are available within Organization – Centralized view

Within Function, expand Function Hierarchy and select:
- Function Group for Appropriation Program
- Function Type for Allotment Program

Posting Code can be used to get the nature of the transaction.

Closing Classification is used to pick:
- expenditures (10,11)
- encumbrances (12), or
- cash balances (5)

Posting Amount is the dollar figure.


Query Panel - Budget Execution Universe - KY
Scope of Analysis: None
Classes and Objects
Fiscal Year
Budget Fiscal Year
COA - Fund Accounting
Fund
Fund
Sub-fund
Close into Account
Capital Asset Fund
Fund hierarchy
CAFR Fund
Object
Revenue
Balance Sheet Account
Department Object
Department Revenue
COA - Organization
Organization - Centalized view
Organization - Decentralized view
Flex Reporting
COA - Detailed Accounting
Location
Activity
Function
Reporting
COA - Budgeting
COA - Cost Accounting
COA - Drawdown
Event Type
Posting Code
Budget Structure
Unique Identifier
Budget Structure Id
Budget Level
Allotment Option
Accounting Journal
Budgeting Journal
Budget Line Number
Budget Action
Description
Line Amount
Line Amount Signed
Increase/Decrease Indicator
Allotment Information
Budget Allotment Line Number
Allotment Period
Allotment Line Amount
Allotment Line Amount Signed

Fund is now what was PBU, Cash Account and Project

Within CAFR Fund, select CAFR Fund Type to get General, Restricted, etc.

Within Object, expand Object Hierarchy and select Object Type to get Personnel, Operating, etc.

Within Organization – Centralized view, you can select Cabinet, but Department has no data.

Within Function, expand Function hierarchy and select:
- Function Group for Appropriation Program
- Function Type for Allotment Program

Within Event Type, select Event Type to differentiate on the type of budget action (e.g., Continued, Regular, NGE, etc.)

Budget Structure ID:
3 = Operating
43 = Capital

Budget Level ID:
1 = Appropriations
2 = Quarterly Allotments
3 = Annual GF Allotment by Exp. Cat.

Line Amount Signed is the dollar amount.

This dollar amount is needed if you want to see Allotments by Quarter (Allotment Period).

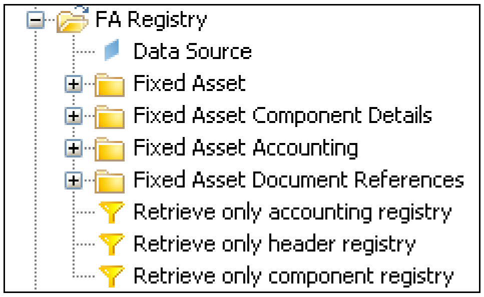
Appendix H
Fixed Assets Universe

Here are a few tips to creating reports using the *Fixed Asset Universe*:

- Pull attributes only from within the lower-level classes of the *FA Registry* class. You may experiment with pulling them in from other classes, but often the results are unpredictable.

  Testing has been focused mostly on this class.

- You should identify the level of data you want by using one of the three filters (see below). If you don't apply one of these, you will likely see duplicate data (because all three levels will be shown).


FA Registry
Data Source
Fixed Asset
Fixed Asset Component Details
Fixed Asset Accounting
Fixed Asset Document References
Retrieve only accounting registry
Retrieve only header registry
Retrieve only component registry

- "***Retrieve only accounting registry***" roughly corresponds to the *Financial FARACTG*;
- "***Retrieve only header registry***" roughly corresponds to *FARHDR*;
- "***Retrieve only component registry***" roughly corresponds to *FARCOMP*.
- All data is a "point in time" current picture of the value of the asset, etc.

- We have had the most success using "*Retrieve only component registry*". But "*Retrieve only header registry*" seems to work too.

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Appendix I
Cost Accounting Posting Code Information

Posting Codes* picked up by the *Reimbursement Offline Process:

Grants and *Projects* set up as *Reimbursable Programs* are reportable using the *KY Cost Accounting Universe*. The following *Posting Codes* are picked up for *Reimbursement* in the offline process which runs weekly**.**

Posting Code	Name
C001	Standard Charge
C002	Back End Split Charge
C003	Revenue Credit
D013	Cash Expenditure/Expense - Warrants
D014	External Cash Expenditure/Expense
D015	Cash Bond Principle Expenditure/Expense
D022	Inventory Cash Expenditure/Expense
D025	Internal Cash Expenditure/Expense
XXPI	Program Income
A017	Operating Transfer Out

Note: A *Posting Code* is set up for reimbursement by setting the *Funding Split Flag* on the *Posting Code* table to "*Split for Reimbursement*" = 3.

Posting Codes* picked up by *Cost Allocation:

For *Departments* running *Cost Allocation* monthly, the following *Posting Codes* are picked up by that process.

Posting Code	Name
D013	Cash Expenditure/Expense - Warrants
D014	External Cash Expenditure/Expense
D015	Cash Bond Principle Expenditure/Expense
D022	Inventory Cash Expenditure/Expense
D025	Internal Cash Expenditure/Expense
F021	Gain/Loss Expense from Sale of Fixed Asset
F022	Internal Expense from Fixed Asset Exchange
A017	Operating Transfer Out

Note: A *Posting Code* is set up for *Cost Allocation* by setting the *Cost Allocation Process Flag* on the *Posting Code* table to "*Cash Expenditure*" = 2

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Appendix J
Closing Classifications

Closing Classification	Closing Classification Name
1	Asset Roll Forward
2	Liability Roll Forward
3	Equity Roll Forward
4	Contra Asset Roll Forward
5	Cash Roll Forward
6	Accounts Left In Old Year
7	Equity Offsets Closed To Net Assets
10	Cash Expenditures
11	Accrued Expenditures
12	Encumbrances
13	Pre Encumbrances
14	Collected Revenue
15	Billed Revenue

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Appendix K
Budget Structure and Level ID

Budget Structure Id	Structure Name
3	KY Expense Budget
39	Reimbursable Grant Budget
42	Revenue Budget
43	Capital Projects

Budget Level Id	Budget Level Name
1	Appropriation
1	Dept/Majr Prog/Prog/Period/Fund Prfl/Fund Prty
1	Fund/Dept
1	Fund/Dept/Appr Unit
2	Allotment Program
2	Dept/Majr Prog/Prog/Period/Fund Prfl/Fund Prty/Fund Line
2	Fund/Dept/Appr Unit/Bureau/Object
2	Fund/Dept/Rev Src
3	Object

Budget Level Id	Budget Level Name	Budget Structure Id	Structure Name
1	Appropriation	3	KY Expense Budget
1	Dept/Majr Prog/Prog/Period/Fund Prfl/Fund Prty	39	Reimbursable Grant Budget
1	Fund/Dept	42	Revenue Budget
1	Fund/Dept/Appr Unit	43	Capital Projects
2	Allotment Program	3	KY Expense Budget
2	Dept/Majr Prog/Prog/Period/Fund Prfl/Fund Prty/Fund Line	39	Reimbursable Grant Budget
2	Fund/Dept/Appr Unit/Bureau/Object	43	Capital Projects
2	Fund/Dept/Rev Src	42	Revenue Budget
3	Object	3	KY Expense Budget

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Appendix L
Posting Codes

Posting Code	Posting Code Name
A001	Cash
A002	Due To Fund
A003	Due From Fund
A004	Bond Revenue
A005	Bonds Payable
A008	Long Term Debt Payable
A009	Expenditure Offset for Pre-Paid Asset
A010	Amount To Be Provided
A011	Undistributed Receipts
A012	Payroll Payable
A013	Reserve for Payroll Encumbrances
A014	Generic Equity
A015	Generic Liability
A016	Generic Asset
A017	Operating Transfer Out
A018	Operating Transfer In
A019	Internal Loans Receivable
A020	Internal Loans Payable
A021	Contributed to Fixed Assets
A022	Bond Payable Offset
A023	Expense
A024	Pre Paid Assets
A025	Accrued Operating Transfer Out
A026	Accrued Operating Transfer In
A027	Bond Discount/Premium
A028	Bank Transfer Cash
A100	Accrued Expenditure Close
A101	Cash Expenditure Close
A102	Billed Revenue Close
A103	Collected Revenue Close
A104	Pre Encumbrance Close
A105	Encumbrance Close
A106	Asset Close
A107	Cash Close
A108	Liability Close

Posting Code	Posting Code Name
A109	Equity Close
A110	Asset Offset Close
A111	Equity Offset Close
A150	Memo Account 1 for Lapse
A151	Memo Account 2 for Lapse
A200	Fund Balance
A201	Retained Earnings
A202	Agency Due To
A203	Net Assets
A204	Annual Close Offset
B001	Expenditure Budget - Adoption
B002	Expenditure Budget - Amendment
B003	Expenditure Budget - Carry Forward
B004	Expenditure Budget - Transfer In
B005	Expenditure Budget - Transfer Out
B006	Revenue Budget - Expected
B007	Expenditure Budget - Allocation
B008	Expenditure Budget - Reversion
B009	Reimbursable Budget - Award
B010	Revenue Budget - Adoption
B011	Revenue Budget - Allocation
B012	Revenue Budget - Amendment
B013	Revenue Budget - Carry Forward
B014	Revenue Budget - Reversion
B015	Revenue Budget - Transfer Out
B016	Revenue Budget - Transfers
B017	Stand In Code for Budgeting
B018	Expected Revenue
B019	Amend Expected Revenue
C001	Standard Charge
C002	Back End Split Charge
C003	Revenue Credit
D001	Disbursement Payable
D003	Retainage Payable
D004	Stale Payable Cash
D005	Escheat Payable Cash
D006	Use Tax Payable
D007	Warrant Payable
D008	Stale Warrants Payable

Posting Code	Posting Code Name
D009	Escheat Warrants Payable
D010	Backup Withholding Payable
D011	External Accrued Expenditure / Expense
D012	Accrued Bond Principle Expense
D013	Cash Expenditure/Expense - Warrants
D014	External Cash Expenditure/Expense
D015	Cash Bond Principle Expenditure/Expense
D017	Warrant Clearing Cash
D018	Warrant Clearing Payable
D019	Cancelled Disbursement Payable
D021	Inventory Accrued Expenditure / Expense
D022	Inventory Cash Expenditure/Expense
D023	Cost of Goods Sold
D024	Internal Accrued Expenditure / Expense
D025	Internal Cash Expenditure/Expense
D090	Checkwriter 1099 Posting
D091	Check Writer
D0W7	Warrant Payable
D101	Stale Payable Disbursement
D102	Escheat Payable Disbursement
D201	Intercept Payable
D202	Intercepted Cash
F001	Pending Fixed Asset
F002	Fixed Asset
F004	Due To Fund - Fixed Asset Internal Sales
F005	Due From Fund - Fixed Asset Internal Sales
F010	Expense Offset for Fixed Asset
F011	Contributed to Fixed Assets
F012	Net Adjustment to Fixed Assets
F020	Depreciation Expense
F021	Gain/Loss Expense from Sale of Fixed Asset
F022	Internal Expense from Fixed Asset Exchange
F030	Sale of Fixed Asset Revenue
F031	Gain/Loss Revenue from Sale of Fixed Asset
F032	Internal Revenue from Fixed Asset Exchange
F040	Accumulated Depreciation
H001	Accrued Payroll
H002	Net Pay
H003	Deduction

Posting Code	Posting Code Name
H004	Reserved Pay
H005	Fringe
H006	Accrued Leave
I001	Investment Cash
I002	Investments
I003	Investment Discounts
I004	Investment Premiums
I005	Accrued Interest Receivable
I006	Investment Interest Revenue
I007	Investment Equity
M001	Memo Asset
M002	Offset for Memo Fixed Asset
M003	Accumulated Depreciation - Memo Asset
OB01	Obligation entry
P001	Procurement Non-Accounting Nominal
P002	Procurement Non-Accounting Offset
P003	Pre Encumbrance
P004	Reserve for Pre Encumbrance
P005	Encumbrance
P006	Reserve for Encumbrance
P010	Memo Pre Encumbrance
P011	Reserve for Memo Pre Encumbrance
P012	Memo Encumbrance
P013	Reserve for Memo Encumbrance
R001	Billed Earned Receivable
R002	External Billed Earned Revenue
R003	External Collected Earned Revenue
R004	Billed Earned Receivable Sent for Collection
R005	Billed NSF Revenue
R006	Collected NSF Revenue
R007	Bad Debt Expense
R008	Allowance for Bad Debt
R009	Earned Receivable
R010	Earned Revenue
R021	Inventory Accrued Revenue
R022	Inventory Collected Revenue
R023	Internal Accrued Revenue
R024	Internal Collected Revenue
R100	Billed Unearned Receivable

Posting Code	Posting Code Name
R101	Billed Unearned Revenue
R102	Collected Unearned Revenue
R103	Unearned Receivable Write Off
R104	Unearned Revenue Write Off
R105	Unearned Revenue for Pre Payment
R200	Billed Deposit Receivable
R201	Billed Deposit
R202	Collected Deposit
R203	Deposit Receivable Write Off
R204	Deposit Write Off
R300	Billed Vendor Refund Receivable
R301	Expenditure Refund Holding Account
R304	Billed Vendor Refund Sent for Collection
R305	Vendor Refund Receivable Write Off
R306	Vendor Refund Write Off
R400	Reserved Overpayment
R401	Unreserved Overpayment
S001	Inventory/Stock Items
S002	Inventory/Stock Offset
S003	Inventory/Stock Due To Fund
S004	Inventory/Stock Due From Fund
S005	Inventory Adjustment Expense
XJV1	Off-Bud Operating Transfer Out
XR03	External Collected Earned Revenue Refund
XTE1	Travel Non-Accounting Nominal
XTE2	Travel Non-Accounting Offset
XX03	Conv External Collected Earned Revenue
XX14	Conv External Cash Expenditure/Expense
XX17	Conv Off-Bud Operating Transfer Out
XXCO	Standard Charge-Offset
XXEX	Conversion Exp PSCD
XXP3	Standard Charge-Non Reim
XXPI	Program Income
XXRV	Conversion Rev PSCD
XXX3	Conv External Collected Earned Revenue
XXXX	Conversion Offset

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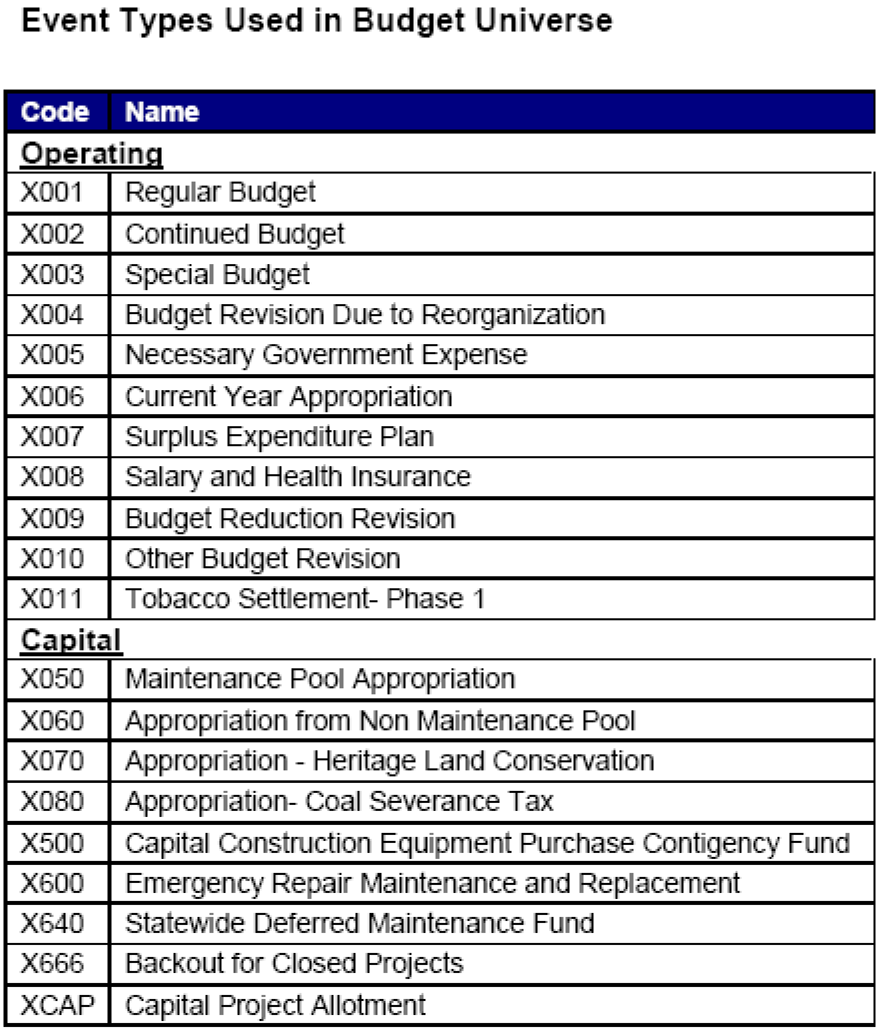
Appendix M
Event Types



Event Types Used in Budget Universe

Code	Name
Operating	
X001	Regular Budget
X002	Continued Budget
X003	Special Budget
X004	Budget Revision Due to Reorganization
X005	Necessary Government Expense
X006	Current Year Appropriation
X007	Surplus Expenditure Plan
X008	Salary and Health Insurance
X009	Budget Reduction Revision
X010	Other Budget Revision
X011	Tobacco Settlement- Phase 1
Capital	
X050	Maintenance Pool Appropriation
X060	Appropriation from Non Maintenance Pool
X070	Appropriation - Heritage Land Conservation
X080	Appropriation- Coal Severance Tax
X500	Capital Construction Equipment Purchase Contigency Fund
X600	Emergency Repair Maintenance and Replacement
X640	Statewide Deferred Maintenance Fund
X666	Backout for Closed Projects
XCAP	Capital Project Allotment

Event Type	Event Type Name
AP01	Authorize Normal Payment
AP02	Authorize Pre Payment
AP03	Authorize Retainage Payment
AP04	Authorize Use Tax Payment
AP05	Authorize Backup Withholding Payment
AP06	Authorize Deposit Refund
AP07	Authorize Prepayment Refund
AP08	Authorize Unreserved Credit Balance Refund
AP09	Authorize Reserved Credit Balance Refund
AP10	Authorize Earned Revenue Refund
AP11	Authorize Stale Payment
AP12	Authorize Escheat Payment
AP13	Authorize Bond Principal Payment
AP14	Forfeiture of Retainage to Expenditure
AP15	Forfeiture of Retainage to Undistributed Receipts
AP16	Equity Payout Authorization
AP17	Liability Payout Authorization
AP18	Asset Payout Authorization
AP19	Authorize Bond Interest Payment
AR01	Bill Earned Revenue
AR02	Collect Earned Revenue
AR03	Write Off Earned Revenue - Direct Method
AR04	Write Off Earned Revenue - Allowance Method
AR05	Refer Earned Receivable to Collection Agency
AR06	Accrue Earned Revenue
AR10	Bill Unearned Revenue
AR11	Collect Unearned Revenue
AR12	Write Off Unearned Revenue
AR13	Collect Pre Payment
AR20	Bill Deposit
AR21	Collect Deposit
AR22	Write Off Deposit
AR30	Bill Vendor Refund - Budgetary
AR31	Bill Vendor Refund - Non Budgetary
AR32	Collect Vendor Refund
AR33	Write Off Vendor Refund
AR34	Refer Vendor Refund to Collection Agency - Budgetary
AR35	Refer Vendor Refund to Collection Agency - Non Budgetary
AR40	Collect Unreserved Overpayment
AR41	Collect Reserved Overpayment

Event Type	**Event Type Name**
AR50	Bill to Asset Account
AR51	Collect to Asset Account
AR52	Bill to Liability Account
AR53	Collect to Liability Account
AR54	Bill to Equity Account
AR55	Collect to Equity Account
BG01	Adopt An Expense Budget
BG02	Allocate An Expense Budget
BG03	Amend An Expense Budget
BG04	Carry Forward An Expense Budget
BG05	Revert An Expense Budget
BG06	Transfer In An Expense Budget
BG07	Transfer Out An Expense Budget
BG08	Deactivate Budget Line
BG09	Activate Budget Line
BG10	Delete Budget Line
BG21	Estimate Expected Revenue
BG22	Award Reimbursable Budget
BG23	Adopt a Revenue Budget
BG24	Allocate A Revenue Budget
BG25	Amend A Revenue Budget
BG26	Carry Forward A Revenue Budget
BG27	Revert A Revenue Budget
BG28	Transfer A Revenue Budget
BG29	Transfer Out A Revenue Budget
BG30	Appropriation Expected Revenue
BG31	Amend Appropriation Expected Revenue
CA01	Expenditure Allocation
CA02	Revenue Allocation
CA03	Allocation Inverse
CG01	Record Standard Program Charge
CG02	Record Back End Split Program Charge
CG03	Record Revenue Credit
CW01	Check Writer Intercept
DI01	Pay Expenditure by Check - Automatically
DI02	Pay Expenditure by Warrant - Automatically
DI03	Pay Expenditure by C.F. Warrant - Automatically
DI04	Pre Pay by Check - Automatically
DI05	Pre Pay by Warrant - Automatically
DI06	Pre Pay by C.F. Warrant - Automatically

Event Type	Event Type Name
DI07	Pay From Generic Asset by Check - Automatically
DI08	Pay From Generic Asset by Warrant - Automatically
DI09	Pay From Generic Asset by C.F. Warrant - Automatically
DI10	Pay From Generic Liability by Check - Automatically
DI11	Pay From Generic Liability by Warrant - Automatically
DI12	Pay From Generic Liability by C.F. Warrant - Automatically
DI13	Pay From Generic Equity by Check - Automatically
DI14	Pay From Generic Equity by Warrant - Automatically
DI15	Pay From Generic Equity by C.F. Warrant - Automatically
DI16	Payout Stale Disbursement by Check - Automatically
DI17	Payout Stale Disbursement by Warrant - Automatically
DI18	Payout Stale Disbursement by C.F. Warrant - Automatically
DI19	Payout Escheated Disbursement by Check - Automatically
DI20	Payout Escheated Disbursement by Warrant - Automatically
DI21	Payout Escheated Disbursement by CF Warrant - Automatically
DI22	Pay Use Tax by Check - Automatically
DI23	Pay Use Tax by Warrant - Automatically
DI24	Pay Use Tax by C.F. Warrant - Automatically
DI25	Pay Backup Withholding by Check - Automatically
DI26	Pay Backup Withholding by Warrant - Automatically
DI27	Pay Backup Withholding by C.F. Warrant - Automatically
DI28	Return Deposit by Check - Automatically
DI29	Return Deposit by Warrant - Automatically
DI30	Return Deposit by C.F. Warrant - Automatically
DI31	Return Prepayment by Check - Automatically
DI32	Return Prepayment by Warrant - Automatically
DI33	Return Prepayment by C.F. Warrant - Automatically
DI34	Return Unreserved Overpayment by Check - Automatically
DI35	Return Unreserved Overpayment by Warrant - Automatically
DI36	Return Unreserved Overpayment by CF Warrant - Automatically
DI37	Return Reserved Overpayment by Check - Automatically
DI38	Return Reserved Overpayment by Warrant - Automatically
DI39	Return Reserved Overpayment by C.F. Warrant - Automatically
DI40	Refund Earned Revenue by Check - Automatically
DI41	Refund Earned Revenue by Warrant - Automatically
DI42	Refund Earned Revenue by C.F. Warrant - Automatically
DI43	Payout Retainage by Check - Automatically
DI44	Payout Retainage by Warrant - Automatically
DI45	Payout Retainage by C.F. Warrant - Automatically
DI46	Payout Bond Principal by Check - Automatically

Event Type	**Event Type Name**
DI47	Payout Bond Principal by Warrant - Automatically
DI48	Payout Bond Principal by C.F. Warrant - Automatically
DI51	Pay Expenditure by Check - Manually
DI52	Pay Expenditure by Warrant - Manually
DI53	Pay Expenditure by C.F. Warrant - Manually
DI54	Pre Pay by Check - Manually
DI55	Pre Pay by Warrant - Manually
DI56	Pre Pay by C.F. Warrant - Manually
DI57	Pay From Generic Asset by Check - Manually
DI58	Pay From Generic Asset by Warrant - Manually
DI59	Pay From Generic Asset by C.F. Warrant - Manually
DI60	Pay From Generic Liability by Check - Manually
DI61	Pay From Generic Liability by Warrant - Manually
DI62	Pay From Generic Liability by C.F. Warrant - Manually
DI63	Pay From Generic Equity by Check - Manually
DI64	Pay From Generic Equity by Warrant - Manually
DI65	Pay From Generic Equity by C.F. Warrant - Manually
DI66	Payout Stale Disbursement by Check - Manually
DI67	Payout Stale Disbursement by Warrant - Manually
DI68	Payout Stale Disbursement by C.F. Warrant - Manually
DI69	Payout Escheated Disbursement by Check - Manually
DI70	Payout Escheated Disbursement by Warrant - Manually
DI71	Payout Escheated Disbursement by C.F. Warrant - Manually
DI72	Pay Use Tax by Check - Manually
DI73	Pay Use Tax by Warrant - Manually
DI74	Pay Use Tax by C.F. Warrant - Manually
DI75	Pay Backup Withholding by Check - Manually
DI76	Pay Backup Withholding by Warrant - Manually
DI77	Pay Backup Withholding by C.F. Warrant - Manually
DI78	Return Deposit by Check - Manually
DI79	Return Deposit by Warrant - Manually
DI80	Return Deposit by C.F. Warrant - Manually
DI81	Return Prepayment by Check - Manually
DI82	Return Prepayment by Warrant - Manually
DI83	Return Prepayment by C.F. Warrant - Manually
DI84	Return Unreserved Overpayment by Check - Manually
DI85	Return Unreserved Overpayment by Warrant - Manually
DI86	Return Unreserved Overpayment by C.F. Warrant - Manually
DI87	Return Reserved Overpayment by Check - Manually
DI88	Return Reserved Overpayment by Warrant - Manually

Event Type	Event Type Name
DI89	Return Reserved Overpayment by C.F. Warrant - Manually
DI90	Refund Earned Revenue by Check - Manually
DI91	Refund Earned Revenue by Warrant - Manually
DI92	Refund Earned Revenue by C.F. Warrant - Manually
DI93	Payout Retainage by Check - Manually
DI94	Payout Retainage by Warrant - Manually
DI95	Payout Retainage by C.F. Warrant - Manually
DI96	Payout Bond Principal by Check - Manually
DI97	Payout Bond Principal by Warrant - Manually
DI98	Payout Bond Principal by C.F. Warrant - Manually
DR01	Stale Cash/CF Warrant Disbursement
DR02	Stale Warrant Disbursement
DR03	Escheat Cash/CF Warrant Disbursement
DR04	Escheat Warrant Disbursement
DR05	Cancel Cash/CF Warrant Disbursement
DR06	Cancel Warrant Disbursement
DR07	Reclass Cash/CF Warrant as Cancelled D/P
DR08	Reclass Warrant as Cancelled D/P
DR09	Reclass Cash/CF Warrant as Revenue
DR10	Reclass Warrant as Revenue
DR11	Reclass Cash/CF Warrant as Equity
DR12	Reclass Warrant as Equity
DR20	Redeem C.F. Warrant
DR21	Redeem Regular Warrant
ED01	External Debt Intercept Transfer with Same Banks - Unearned
ED02	External Debt Intercept Transfer with Diff Banks - Unearned
FA01	Acquire a Fixed Asset
FA02	Better a Fixed Asset
FA03	Record Depreciation on an Individual Fixed Asset
FA04	Dispose of a Fixed Asset
FA05	Modify Fixed Asset Non-Accounting Attributes
FA06	Transfer a Fixed Asset
FA07	Change Value of Fixed Asset
FA08	Change Status of a Fixed Asset
FA09	Sale a Fixed Asset Internally
FA10	Increase Value from Shell
FA11	Cancellation of a Fixed Asset
FA12	Change Selling Price of a Fixed Asset
FA13	Mass Depreciation Fixed Assets
FA14	Unpend a Fixed Asset Shell

Event Type	Event Type Name
FA20	Non-Budgeted Fixed Asset Purchase
FA21	NB Fixed Asset Purchase by Check - Automatically
FA22	NB Fixed Asset Purchase by Warrant - Automatically
FA23	NB Fixed Asset Purchase by CF Warrant - Automatically
FA24	NB Fixed Asset Purchase by Check - Manually
FA25	NB Fixed Asset Purchase by Warrant - Manually
FA26	NB Fixed Asset Purchase by CF Warrant - Manually
FA27	Acquire a Fixed Asset Internally
FA28	Better a Fixed Asset Internally
GA01	Cash Expenditure Correction
GA02	Lapse Encumbrances & Pre Encumbrances
GA04	Establish Allowance for Bad Debt
GA05	Collected Earned Revenue Correction
GA06	Move Cancelled D/P into Revenue
GA10	Cash Transfer
GA13	Recongnize Expense From Prepayment
GA16	Collect Bond Proceeds
GA17	Record Bond Issuance Costs
GA18	Amortize Bond Discount/Premium
GA19	Accrue Bond Interest
GA20	Record Bond Liability
GA21	Reclassify Bond Premium/Discount
GA22	Bank Transfer
HR01	Accrue Payroll Expenditures
HR02	Record Net Pay
HR03	Record Deductions
HR04	Record Fringe Liability
HR05	Record Contract Pay
HR06	Accrue Leave Liability
HR07	Record Payroll Cash Expenditures
HR10	Record Net Pay to Clearing Fund w/Cash
HR11	Record Net Pay to Clearing Fund w/Clearing Accounts
HR12	Record Deductions to Clearing Fund w/Cash
HR13	Record Deductions to Clearing Fund w/Clearing Accounts
HR14	Record Fringe to Clearing Fund w/Cash
HR15	Record Fringe to Clearing Fund w/Clearing Account
HR20	Record & Request Expenditure Payment for Fringe - Oper Fund
HR21	Request Liability Payment for Fringe
HR22	Request Liability Payment for Deduction
HR23	Record & Request Liability Payment for Reserved Fringe

Event Type	Event Type Name
HR30	Pay Deductions by Check
HR31	Pay Deductions by Warrant
HR32	Pay Deductions by Clearing Fund Warrant
HR33	Pay Fringe Expenditure by Check
HR34	Pay Fringe Expenditure by Warrant
HR35	Pay Fringe Expenditure by Clearing Fund Warrant
HR36	Pay Fringe Expenditure by Check w/Adjustment 1
HR37	Pay Fringe Expenditure by Warrant w/Adjustment 1
HR38	Pay Fringe Expenditure by Clr Fund Warrant w/Adjustment 1
HR39	Pay Fringe Liability by Check
HR40	Pay Fringe Liability by Warrant
HR41	Pay Fringe Liability by Clearing Fund Warrant
HR50	Budget Set Aside for Payroll
HR60	Payroll Expenditure Correction Reinstatement
HR61	Reserve Contract Pay Correction Reinstatement
HR62	Payroll Expenditure Correction Reversal
HR63	Reserve Contract Pay Correction Reversal
HR64	Reinstate Payroll Correction to Liability
HR65	Reinstate Payroll Correction to Equity
HR66	Reinstate Payroll Correction to Revenue
HR70	Convert Net Pay to Cash
HR71	Convert Accrued Expenditure to Cash Expenditure
HR80	Deduction Liability Transfer w/Cash
HR81	Deduction Liability Transfer w/Clearing Accounts
HR82	Deduction Liability Transfer w/No Offsets
HR83	Deduction Liability to Revenue Transfer w/Cash
HR84	Deduction Liability to Revenue Transfer w/Clearing Accounts
HR85	Deduction Liability to Revenue Transfer w/No Offsets
HR86	Deduction Liability to Expense Transfer w/Cash
HR87	Deduction Liability to Expense Transfer w/Clearing Accounts
HR88	Deduction Liability to Expense Transfer w/No Offsets
HR90	Fringe Liability Transfer w/Cash
HR91	Fringe Liability Transfer w/Clearing Accounts
HR92	Fringe Liability Transfer w/No Offsets
HR93	Fringe Liability to Revenue Transfer w/Cash
HR94	Fringe Liability to Revenue Transfer w/Clearing Accounts
HR95	Fringe Liability to Revenue Transfer w/No Offsets
HR96	Fringe Liability to Expense Transfer w/Cash
HR97	Fringe Liability to Expense Transfer w/Clearing Accounts
HR98	Fringe Liability to Expense Transfer w/No Offsets

Event Type	Event Type Name
IE10	Intercept Transfer w/Same Banks - Earned
IE11	Intercept Transfer w/Diff Banks - Earned
IE12	Intercept Transfer w/Same Banks - Unearned
IE13	Intercept Transfer w/Diff Banks - Unearned
IE14	Intercept Transfer w/Same Banks - Deposit
IE15	Intercept Transfer w/Diff Banks - Deposit
IE16	Intercept Transfer w/Same Banks - Vendor Refund
IE17	Intercept Transfer w/Diff Banks - Vendor Refund
IF01	Default Fees Same Banks - Earned Revenue
IF02	Default Fees with Different Banks - Earned Revenue
IF03	Supplementary Fees Same Banks - Unearned Revenue
IF04	Supplementary Fees with Different Banks - Unearned Revenue
IN00	Internal External Event Type on Vendor Line
IN01	Inter Fund Reimbursement with Cash Offsets
IN02	Inter Fund Reimbursement with Non-Cash Offsets
IN03	Intra Fund Reimbursement
IN04	Inter Fund Quasi-External Transaction with Cash Offsets
IN05	Inter Fund Quasi-External Transaction with Non Cash Offsets
IN06	Intra Fund Quasi-External Transaction
IN10	Intercept Transfer w/Same Banks - Earned
IN11	Intercept Transfer w/Diff Banks - Earned
IN12	Intercept Transfer w/Same Banks - Unearned
IN13	Intercept Transfer w/Diff Banks - Unearned
IN14	Intercept Transfer w/Same Banks - Deposit
IN15	Intercept Transfer w/Diff Banks - Deposit
IN16	Intercept Transfer w/Same Banks - Vendor Refund
IN17	Intercept Transfer w/Diff Banks - Vendor Refund
IN20	Operational Transfer with Cash Offsets
IN21	Operational Transfer with Non Cash Offsets
IN22	Internal Loan
IN30	Internal Reimbursement Purchase with Cash
IN31	Internal Reimbursement Purchase with Clearing Accounts
IN32	Internal Quasi External Purchase with Cash
IN33	Internal Quasi External Purchase with Clearing Accounts
IV01	Record Investment
IV02	Record Investment Interest
IV03	Interest Allocation
IV04	Cash Sweep
PR01	Request - Non Accounting
PR02	Request from External Vendor - Accounting

Event Type	Event Type Name
PR03	Request from Internal Vendor - Accounting
PR04	Master Agreement - Non Accounting
PR05	Order from External Vendor - Accounting
PR06	Order from Internal Vendor - Accounting
PR07	Order - Non Accounting
PR08	Multi-Year Contract
PR09	Multi-Year Contract - Consumption
PR10	Multi-Year Contract - Purchase
PR20	Encumbrance Correction
PR21	Encumbrance Liquidation
PR22	Encumbrance Correction & Credit Memo
ST01	Request From Inventory - Non Accounting I
ST02	Request From Inventory - Non Accounting II
ST03	Request From Inventory - Pre Encumber
ST04	Request From Inventory - Encumber
ST05	External Request from Inventory - Non Accounting 1
ST06	External Request from Inventory - Non Accounting 2
ST10	Inventory/Stock Issuance - Quasi External
ST11	Inventory/Stock Issuance - Expenditure Refund
ST12	External Inventory/Stock Issuance - Quasi External
ST13	External Inventory/Stock Issuance - Reimbursement
ST20	Return Stock with Revenue
ST21	Return Stock with Reimbursement
ST22	External Return Stock with Revenue
ST23	External Return Stock with Reimbursement
ST30	Transfer Inventory with Provider Revenue
ST31	Transfer Inventory with Provider Reimbursement
ST40	Adjust Inventory Units & Accounts
ST41	Adjust Inventory Units Only
ST50	Request for Inventory - Consumption I
ST51	Request for Inventory - Consumption II
ST52	Request Inventory - Purchase
ST60	Order for Inventory - Consumption I
ST61	Order for Inventory - Consumption II
ST62	Order Inventory - Purchase
ST63	Encumbrance Correction - Consumption Method
ST64	Encumbrance Liquidation - Consumption Method
ST65	Encumbrance Correction & Credit Memo - Consumption Method
ST66	Encumbrance Correction - Purchase Method
ST67	Encumbrance Liquidation - Purchase Method

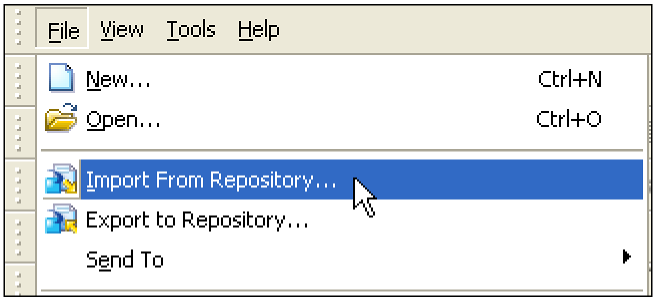
Event Type	Event Type Name
ST68	Encumbrance Correction & Credit Memo - Purchase Method
ST70	Authorize Payment for Inventory - Purchase Method
ST71	Authorize Payment for Inventory - Consumption Method
ST80	Pay for Inventory as Consumption by Check - Automatic
ST81	Pay for Inventory as Consumption by Warrant - Automatic
ST82	Pay for Inventory as Consumption as C.F. Warrant - Automatic
ST83	Pay for Inventory as Consumption by Check - Manual
ST84	Pay for Inventory as Consumption by Warrant - Manual
ST85	Pay for Inventory as Consumption as C.F. Warrant - Manual
TR01	Encumber for Travel
TR02	Travel Advance
TR03	Adjust Travel Costs
TR04	Travel Costs
UR01	UR Event Type for SRQ
UR02	UR Event Type for RQS
UR05	UR Event Type for PO
X001	Regular Budget
X002	Continued Budget
X003	Special Budget
X004	Budget Revision Due to Reorganization
X005	Necessary Government Expense
X006	Current Year Appropriation
X007	Surplus Expenditure Plan
X008	Salary and Health Insurance
X009	Budget Reduction Revision
X010	Other Budget Revision
X011	Tobacco Settlement- Phase 1
X050	Maintenance Pool Appropriation
X060	Appropriation from Non Maintenance Pool
X070	Appropriation - Heritage Land Conservation
X080	Appropriation- Coal Severance Tax
X120	
X500	Capital Construction Equipment Purchase Contigency Fund
X600	Emergency Repair Maintenance and Replacement
X630	
X640	Statewide Deferred Maintenance Fund
X666	Backout for Closed Projects
XA90	Internal Loan Payable
XA91	Internal Loan Receivable
XC01	On-Budget Transfer Out

Event Type	Event Type Name
XC02	Off-Budget Transfer Out
XC03	Transfer In
XCAP	Capital Project Allotment
XCWA	CheckWriter Intercept Payables
XGAA	Asset to Asset
XGAE	Asset to Equity
XGAL	Asset to Liability
XGAR	Asset to Revenue/Exp
XGEE	Equity to Equity
XGLL	Liability to Liability
XGLR	Liability to Revenue
XINA	Investment BSA Adj
XINI	Investment Adj Interface
XINR	Investment BSA/Rev Adj
XMEX	Monthly Expense Budget
XMRV	Monthly Revenue Budget
XN10	Intercept Transfer w/Same Banks - Earned
XP09	Revenue Refund
XPAR	Parks Accounts Receivable
XPRC	PRC Enc Correction
XPSC	UPPS Interface Only
XQEX	Quarterly Expense Budget
XQRV	Quarterly Revenue budget
XREV	Original Revenue Budget
XRMD	Modified Revenue Budget
XTR1	Travel Authorization
XX03	Revenue Refund-Auto
XX69	Revenue Refund-Manual
XXAR	Parks Acct Rec Reduction
XXCA	Cash Conversion
XXCO	Record Standard Program Charge-Off Set
XXEX	Conversion Exp
XXIA	Adjust Inventory Units & Accounts
XXIE	Internal Cash Expd/Expense Correction
XXIR	Internal Collected Revenue Correction
XXP3	Record Standard Program Charge-Non Reim
XXPI	Program income
XXRV	Conversion Rev
XYEX	Yearly Expense Budget
XYRV	Yearly Revenue Budget

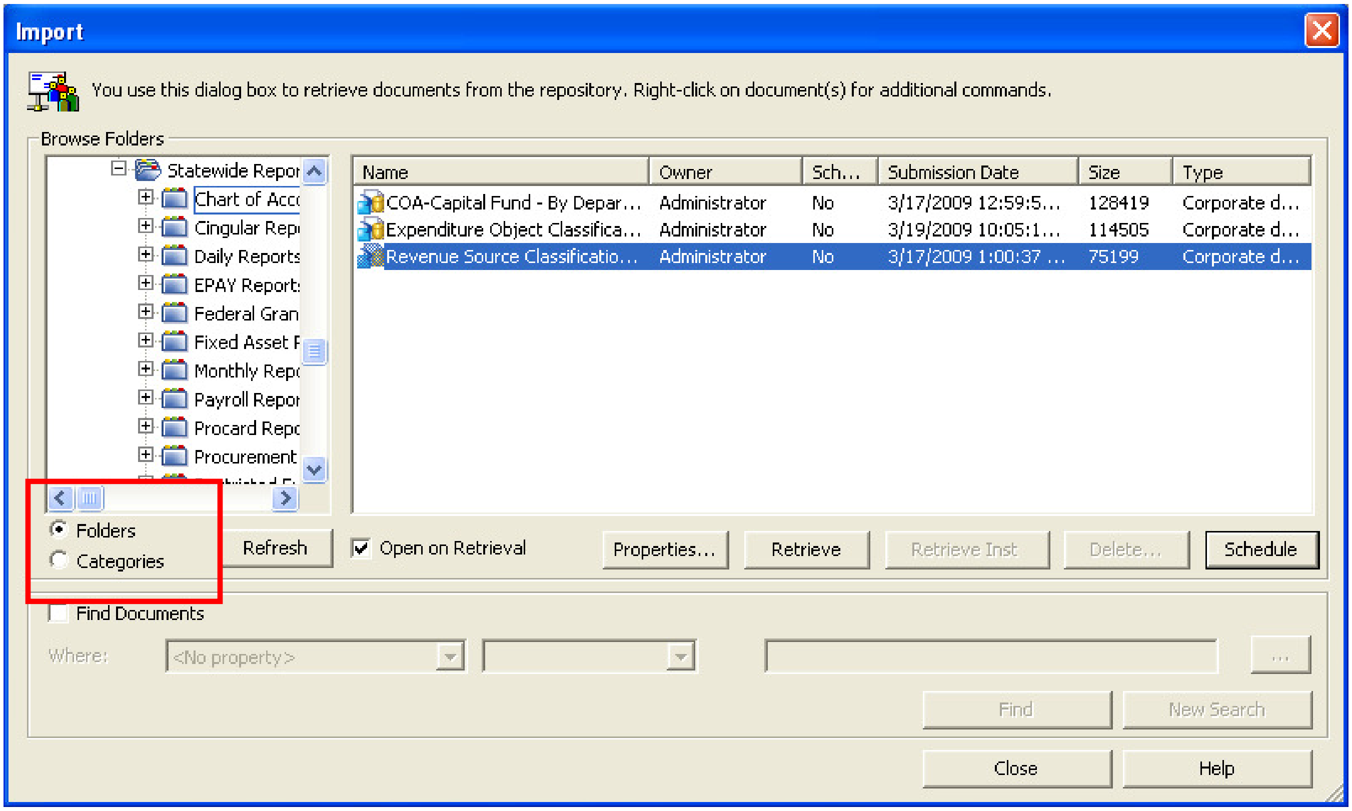
Appendix N
Retrieve/Publish/Send/Save Reports

Retrieving Reports from Corporate Documents

To retrieve a report that has been published to the *infoAdvantage Repository*—Statewide or custom agency report; click on *File > Import From Repository…*


File
View
Tools
Help
New… Ctrl+N
Open… Ctrl+O
Import From Repository…
Export to Repository…
Send To

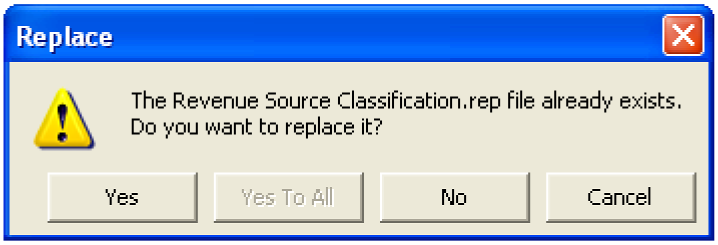
The *Import* dialog box will come up. First, select the *Folders* radio button. Next, under *Browse Folders*, expand the list until you locate the folder where the report is stored. When you find your report, click on it to select it and then click on *Retrieve*.


Import
Browse Folders
Statewide Repor
Chart of Acco
Cingular Rep
Daily Reports
EPAY Report
Federal Gran
Fixed Asset F
Monthly Rep
Payroll Repor
Procard Rep
Procurement
● Folders
○ Categories
Refresh
☑ Open on Retrieval
Properties…
Retrieve
Retrieve Inst
Delete…
Schedule
☐ Find Documents
Where:
<No property>
…
Find
New Search
Close
Help

You use this dialog box to retrieve documents from the repository. Right-click on document(s) for additional commands.

Name	Owner	Sch…	Submission Date	Size	Type
COA-Capital Fund - By Depar…	Administrator	No	3/17/2009 12:59:5…	128419	Corporate d…
Expenditure Object Classifica…	Administrator	No	3/19/2009 10:05:1…	114505	Corporate d…
Revenue Source Classificatio…	Administrator	No	3/17/2009 1:00:37 …	75199	Corporate d…

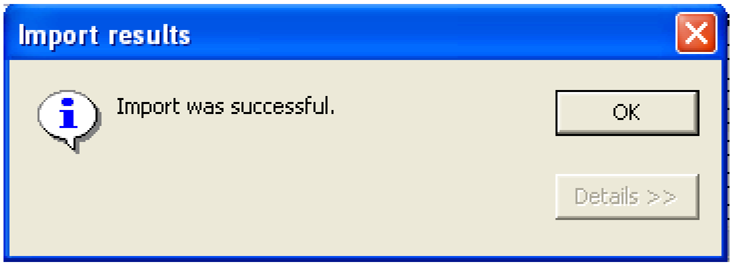
If the report already exists, you will be asked if you want to replace it:



The Revenue Source Classification.rep file already exists.
Do you want to replace it?

Replace
Yes
Yes To All
No
Cancel

If you click on Yes, you will be told if the import was successful.



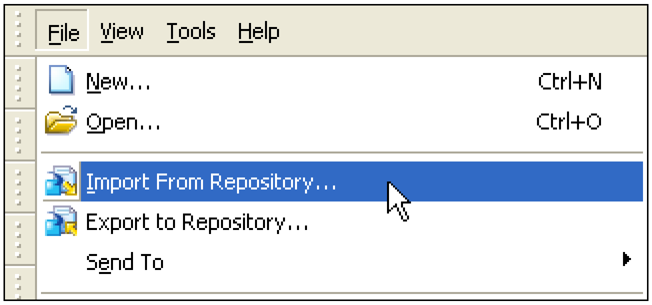
Import was successful.

Import results
OK
Details >>

If it was, the report will open in Desktop Intelligence for you to review, edit or customize for your reporting needs.

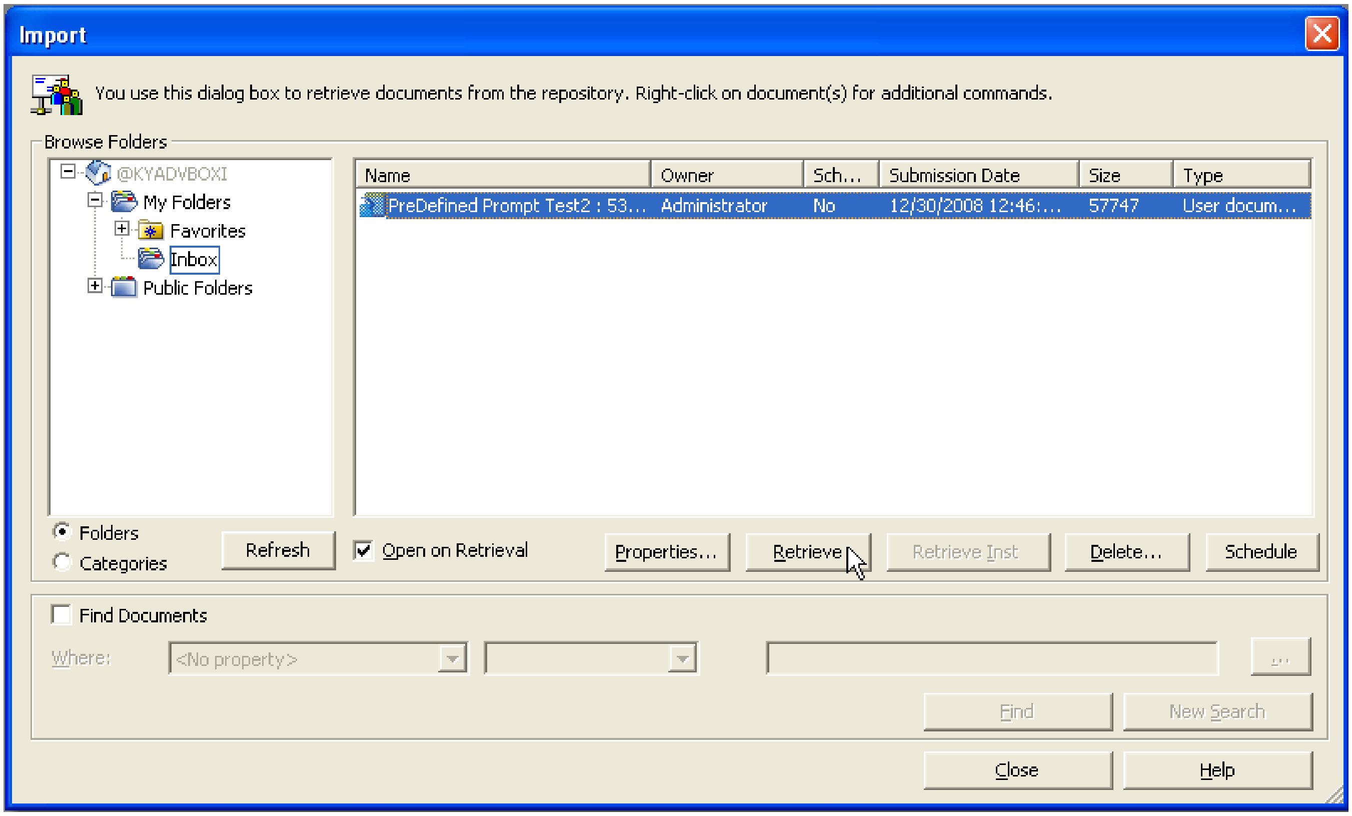
Retrieving Reports from Other Users

To retrieve a report that has been sent to you from another user; click on *File > Import From Repository…*



File
View
Tools
Help
New... Ctrl+N
Open... Ctrl+O
Import From Repository...
Export to Repository...
Send To

The *Import* dialog box will come up. First, select the *Folders* radio button. Next, under *Browse Folders*, expand the list until you locate the *Inbox* folder. When you find your report, click on it to select it and then click on *Retrieve*.

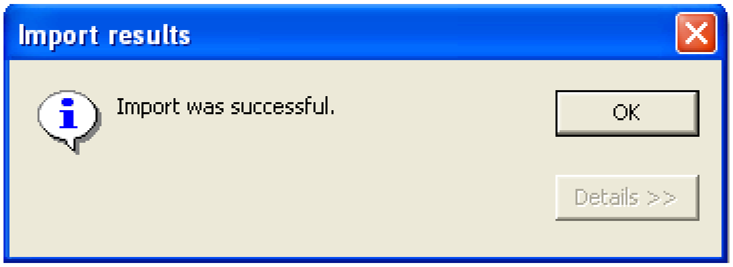

Import
Browse Folders
@KYADVBOXI
My Folders
Favorites
Inbox
Public Folders
Name
Owner
Sch...
Submission Date
Size
Type
Folders
Categories
Refresh
Open on Retrieval
Properties...
Retrieve
Retrieve Inst
Delete...
Schedule
Find Documents
Where:
<No property>
Find
New Search
Close
Help

You use this dialog box to retrieve documents from the repository. Right-click on document(s) for additional commands.

Name	Owner	Sch...	Submission Date	Size	Type
PreDefined Prompt Test2 : 53...	Administrator	No	12/30/2008 12:46:...	57747	User docum...

● Folders
○ Categories
☑ Open on Retrieval
☐ Find Documents

Once you click on *Retrieve*, the report will be imported to your computer. You will receive a message stating "*Import was successful*" if there were no problems retrieving the report.

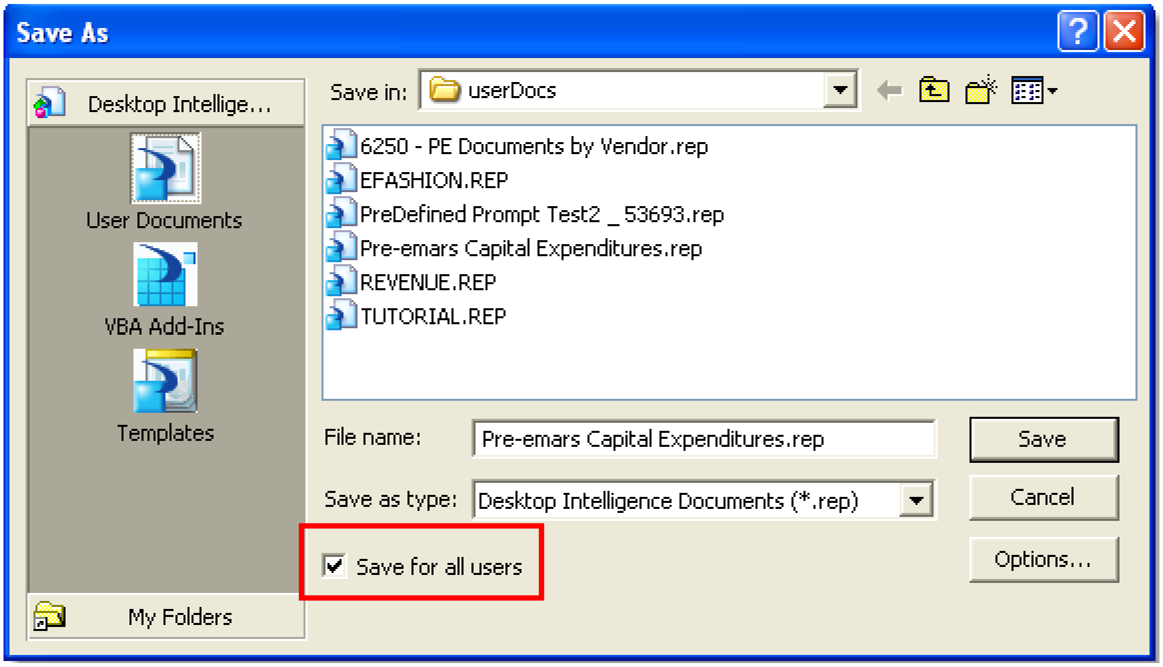

Import results
OK
Details >>

Import was successful.

Once you click on "*OK*", the report will open in Desktop Intelligence for you to review, edit or customize for your reporting needs.

Publishing Reports

Once you have finished with the development of a report, you may publish it to your departmental category. Before you publish your report, be sure to purge each data provider by clicking ***Save and Close***. Also, be sure to save your report with the ***Save for all users*** checkbox selected.

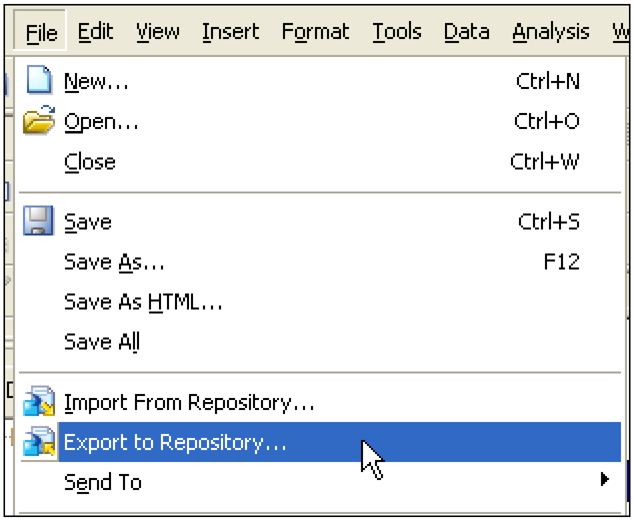

Save As
Desktop Intellige...
User Documents
VBA Add-Ins
Templates
My Folders
Save in: userDocs
6250 - PE Documents by Vendor.rep
EFASHION.REP
PreDefined Prompt Test2 _ 53693.rep
Pre-emars Capital Expenditures.rep
REVENUE.REP
TUTORIAL.REP
Save
Cancel
Options...

File name: Pre-emars Capital Expenditures.rep

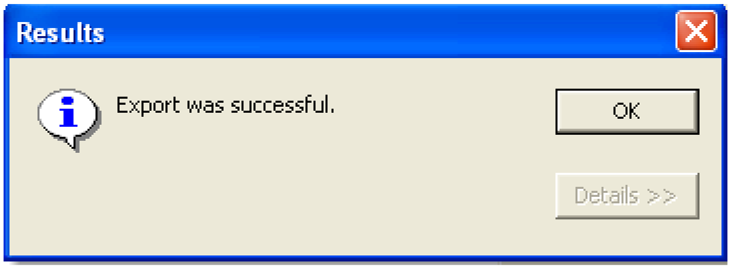
Save as type: Desktop Intelligence Documents (*.rep)

☑ Save for all users

To publish the reports, click on *File > Export to Repository…*


File Edit View Insert Format Tools Data Analysis W
New... Ctrl+N
Open... Ctrl+O
Close Ctrl+W
Save Ctrl+S
Save As... F12
Save As HTML...
Save All
Import From Repository...
Export to Repository...
Send To

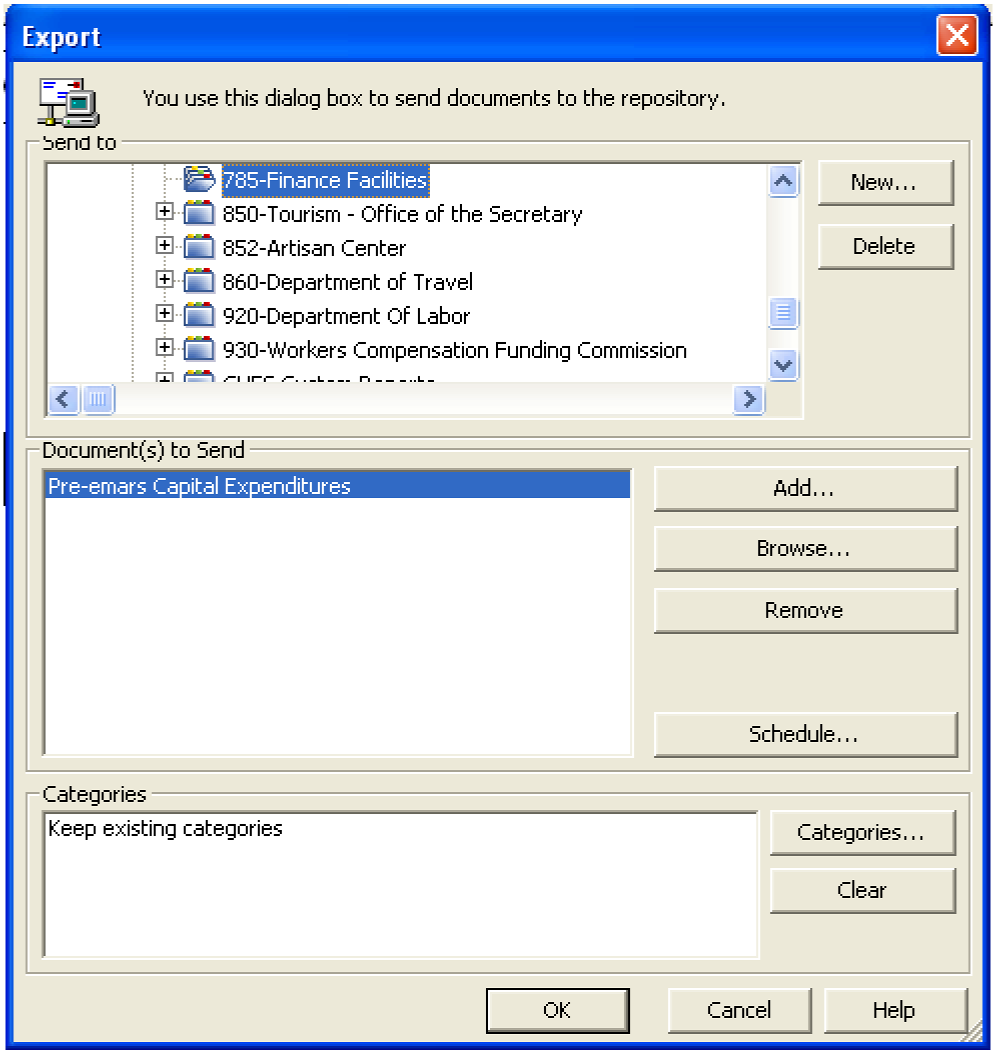
The *Export* dialog box will come up. Here you will be able to choose the *Folder* where you want to send the report to. After you click on *OK*, if the report already exists in the repository you may be asked whether you want to replace it. Then you will get a *Results* dialog box that will tell you if the report was successfully exported.



Results

Export was successful.

In the example below, the *Pre-emars Capital Expenditures Report* report is being exported to the *785-Finance Facilities* folder in the reporting repository.



Export

You use this dialog box to send documents to the repository.

Send to

785-Finance Facilities
850-Tourism - Office of the Secretary
852-Artisan Center
860-Department of Travel
920-Department Of Labor
930-Workers Compensation Funding Commission

Document(s) to Send

Pre-emars Capital Expenditures

Categories

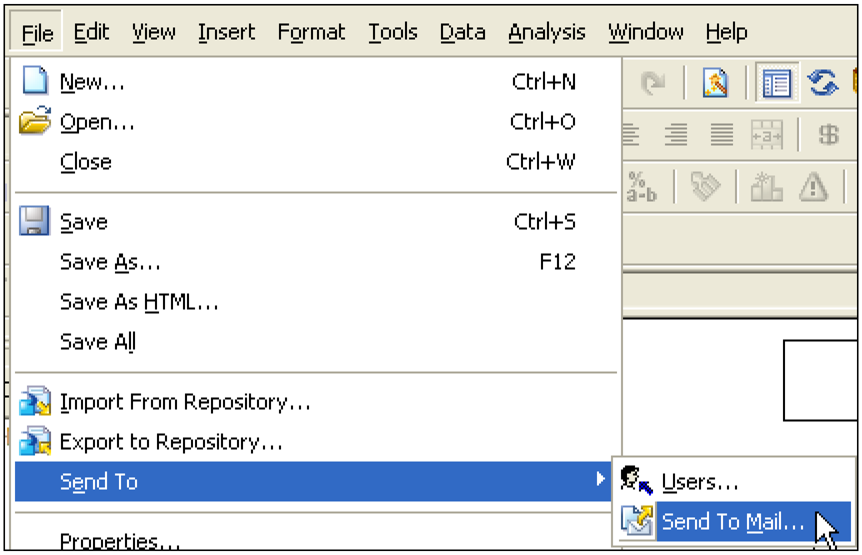
Keep existing categories

New...
Delete
Add...
Browse...
Remove
Schedule...
Categories...
Clear
OK
Cancel
Help

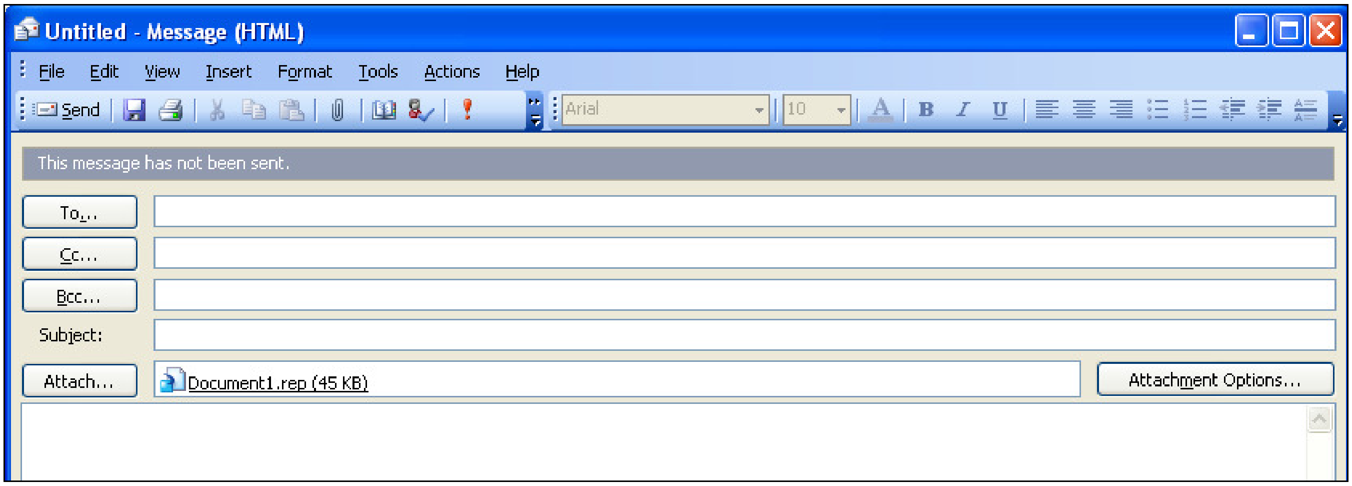
Sending Reports

Desktop Intelligence offers the ability to send reports to others for analysis or for customization.

To send a report to another user, click on *File > Send To > Send To Mail…*


File
Edit
View
Insert
Format
Tools
Data
Analysis
Window
Help
New… Ctrl+N
Open… Ctrl+O
Close Ctrl+W
Save Ctrl+S
Save As… F12
Save As HTML…
Save All
Import From Repository…
Export to Repository…
Send To
Properties…
Users…
Send To Mail…

An email will open with the report attached. Enter the other user's email address and send the email. The other user can save or open the report just like other email attachments.

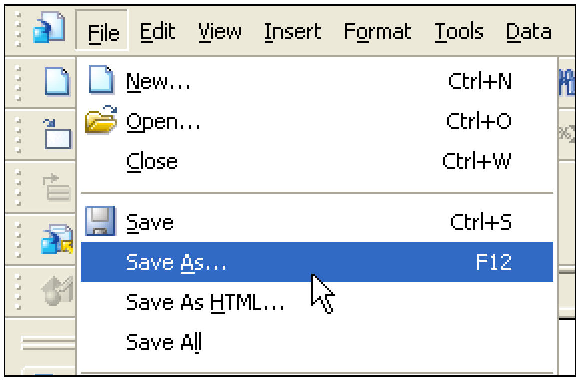

Untitled - Message (HTML)
File
Edit
View
Insert
Format
Tools
Actions
Help
Send
Arial
10
To…
Cc…
Bcc…
Subject:
Attach…
Attachment Options…

This message has not been sent.

Document1.rep (45 KB)

Saving Reports

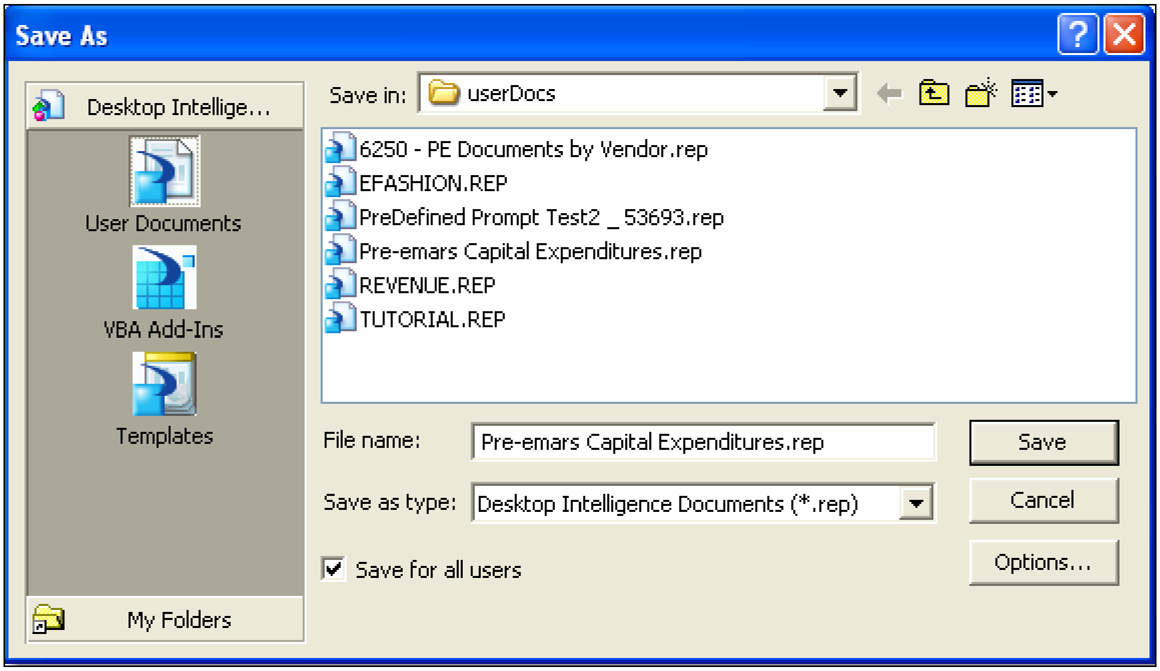
Saving your report periodically is extremely important. To save a Desktop Intelligence report, click on *File > Save As*.


File
Edit
View
Insert
Format
Tools
Data
New... Ctrl+N
Open... Ctrl+O
Close Ctrl+W
Save Ctrl+S
Save As... F12
Save As HTML...
Save All

When the "*Save As*" screen comes up, you need to

1. Select the folder to "*Save in*".
2. Enter a "*File name*".
3. "*Save as type*" *Desktop Intelligence Documents (*.rep)*
4. "*Save for all users*"
    a. It is important to click on the box "*Save for all users*". The "*Save for all users*" option removes any corporate security that is placed on a report and makes it available for anybody with *Business Objects*.

       There have been instances were users could not open a report if the report was saved without checking this option. As good practice, always select this option.


Save As

Save in: userDocs

6250 - PE Documents by Vendor.rep
EFASHION.REP
PreDefined Prompt Test2 _ 53693.rep
Pre-emars Capital Expenditures.rep
REVENUE.REP
TUTORIAL.REP

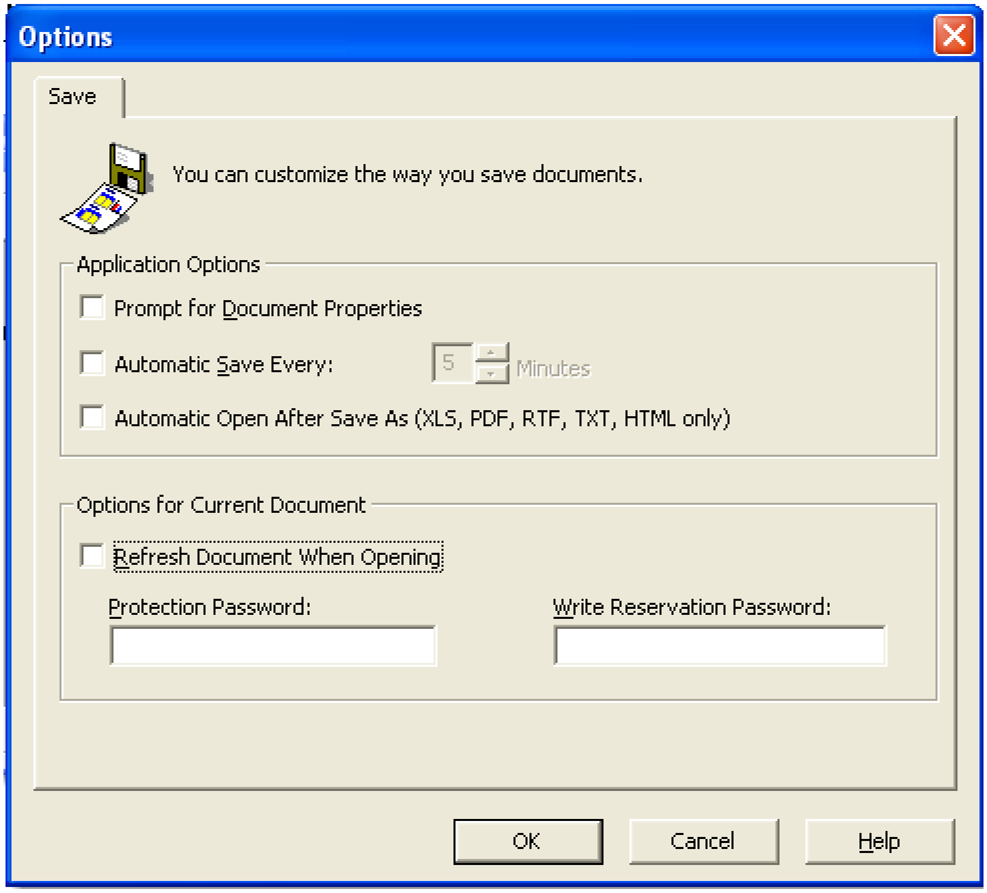
File name: Pre-emars Capital Expenditures.rep

Save as type: Desktop Intelligence Documents (*.rep)

☑ Save for all users

Desktop Intellige...
User Documents
VBA Add-Ins
Templates
My Folders
Save
Cancel
Options...

5. "*Options…*" Under "*Options*" you have several options to choose from. Some important ones are:
   a. *Automatic Save Every:*
      i. This will allow you to have Desktop Intelligence automatically save your report occasionally so that you won't lose any changes due to power failure or computer failure.
   b. *Refresh Document When Opening*
      i. When selected, this option will automatically refresh the report each time that it is opened. ***THIS OPTION IS NOT RECOMMENDED.***
   c. *Protection Password:*
      i. This puts a password on your report so that only those who have the password may open the report.



You can customize the way you save documents.

Application Options

☐ Prompt for Document Properties

☐ Automatic Save Every: 5 Minutes

☐ Automatic Open After Save As (XLS, PDF, RTF, TXT, HTML only)

Options for Current Document

☐ Refresh Document When Opening

Protection Password:

Write Reservation Password:

Appendix O
Using External Data in Business Objects

Using external data in Business Objects Desktop Intelligence can prove beneficial. For training purposes, a simple example of importing a spreadsheet and creating a report will be sufficient. For the example throughout this document, the *Business Objects Report Developers (Thick Client)* spreadsheet will be imported into *Business Objects* and formatted into a readable report.

The major issue with importing spreadsheets into *Business Objects* is the data type of the data. Sometimes, even though data is formatted as text or character in a spreadsheet, *Business Objects* will not correctly import the data. A tip for converting data to text or character formatting is placing a single quote (‘) in front of the data.

For example, in the spreadsheet used in this document, *CAB, DEPT, and NAME* are all text fields. However, without the single quote (‘), even though the *CAB* and *DEPT* field may be formatted as text, *Business Objects* will read it as a number and will not import the value. Instead an *Empty* value comes across.

CAB	DEPT	NAME
10	005	Legislative Research Commission

Therefore, to make sure everything is read as text or character, single quotes (‘) must be inserted in front of the data. Please keep in mind that you won’t see the single quotes (‘) on the spreadsheet itself, only in the formula editor will they be shown ('Legislative).

CAB	DEPT	NAME
‘10	‘005	‘Legislative Research Commission

Granted, if you have a large spreadsheet with hundreds or thousands of rows of data, inserting a single quote (‘) in front of data found in each cell would be ridiculous to do by hand. A macro could be written in excel to do this for you.

The below macro can be created and used in every spreadsheet used to import data into *Business Objects.* When run, the macro asks for the column of data where single quotes (‘) should be inserted. It will automatically insert single quotes (‘) in front of each cell of data. The macro would have to be run for each column that contains text or character data types.

```
Sub SingleQuotes()

Dim intRows As Integer
Dim index As Integer
Dim strActiveValue As String

intRows = ActiveSheet.UsedRange.Rows.Count

intChangeCol = InputBox("Enter the column letter that you want to change:")

For index = 2 To intRows
```

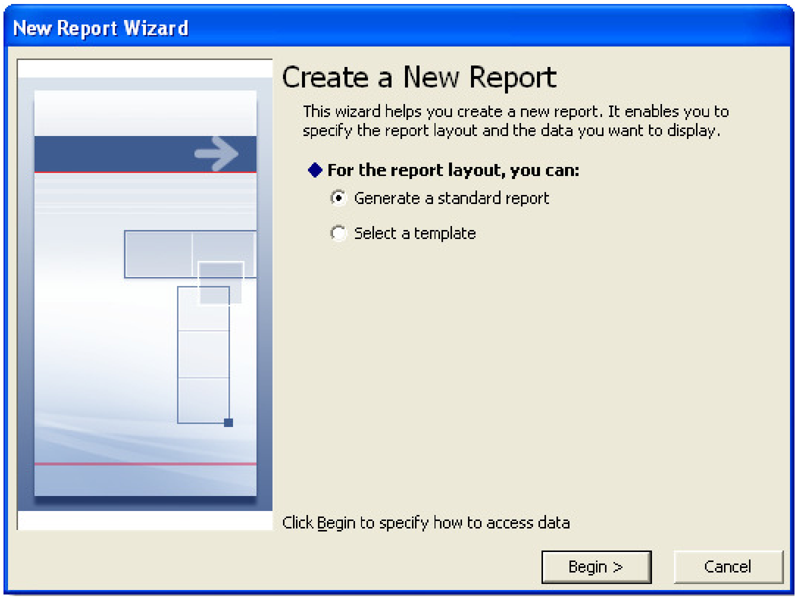
```
        strActiveValue = ActiveSheet.Cells(index, intChangeCol).Value
        ActiveSheet.Cells(index, intChangeCol).Value = "'" + strActiveValue
        'MsgBox ("'" + strActiveValue)

    Next

    End Sub
```

After formatting the spreadsheet and saving it, the next step would be to import it into *Business Objects.*

Let us walk through importing a spreadsheet into Business Objects Desktop Intelligence and formatting a report.



New Report Wizard

Create a New Report

This wizard helps you create a new report. It enables you to specify the report layout and the data you want to display.

◆ **For the report layout, you can:**

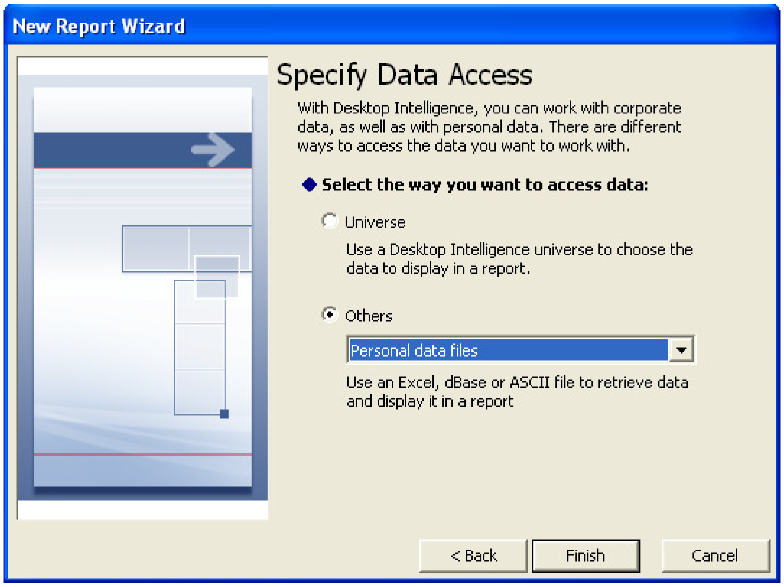
● Generate a standard report

○ Select a template

Click Begin to specify how to access data

In the *New Report Wizard*, *Create a New Report* screen, click on *Begin* to *Generate a Standard Report.*

Next, click on *Others*, select *Personal data files* and click on *Finish*.



New Report Wizard

Specify Data Access

With Desktop Intelligence, you can work with corporate data, as well as with personal data. There are different ways to access the data you want to work with.

◆ **Select the way you want to access data:**

○ Universe

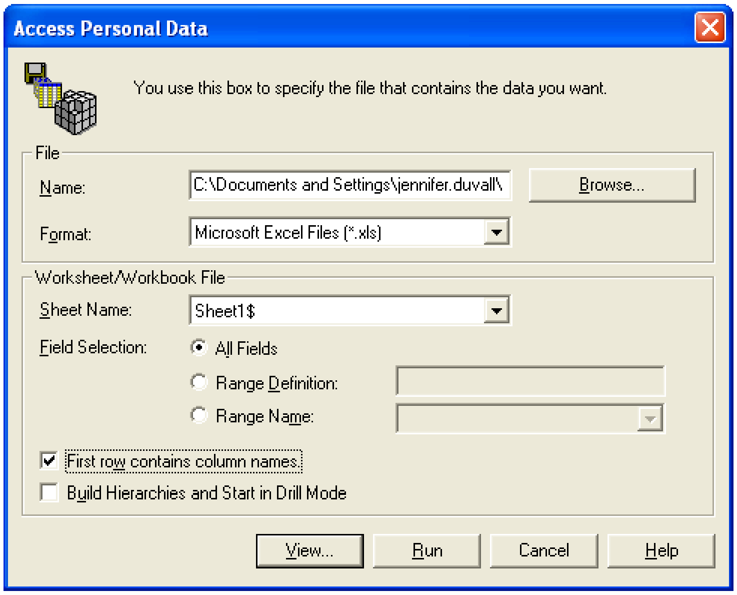
Use a Desktop Intelligence universe to choose the data to display in a report.

● Others

Personal data files

Use an Excel, dBase or ASCII file to retrieve data and display it in a report

On the *Access Personal Data* screen, select the *Format* of the file you will import. In this case, the format is *Microsoft Excel Files (*.xls)*. Next, *Browse* for the file. Chose the *Sheet Name* if importing an *Excel* file, *All Fields* unless there is a specific range of data to be imported, and be sure to select *First row contains column names* if you want to bring headers into the report. Click on *Run*.



Access Personal Data

You use this box to specify the file that contains the data you want.

File

Name: C:\Documents and Settings\jennifer.duvall\

Format: Microsoft Excel Files (*.xls)

Worksheet/Workbook File

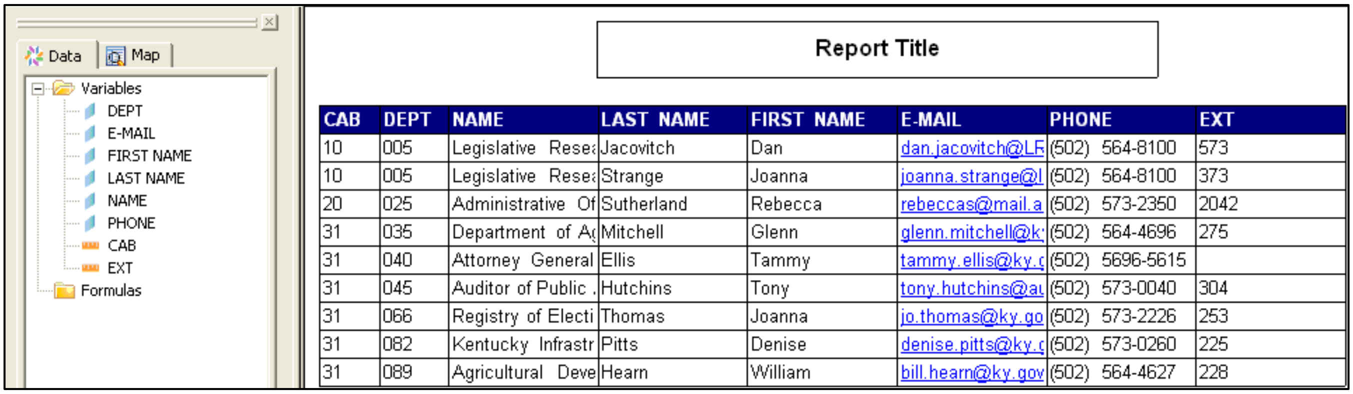
Sheet Name: Sheet1$

Field Selection: ● All Fields ○ Range Definition: ○ Range Name:

☑ First row contains column names.

☐ Build Hierarchies and Start in Drill Mode

When you click on *Run, Business Objects* automatically creates *Dimension Objects* and presents the data in a table.



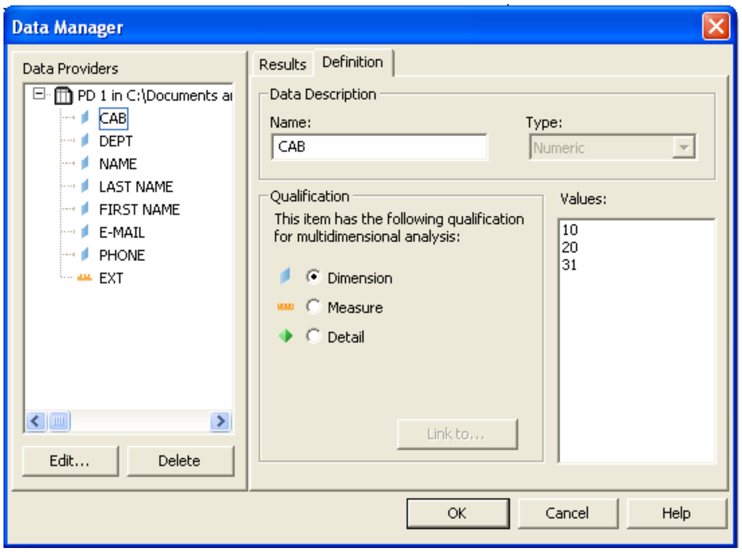
Report Title

CAB	DEPT	NAME	LAST NAME	FIRST NAME	E-MAIL	PHONE	EXT
10	005	Legislative Resea	Jacovitch	Dan	dan.jacovitch@LR	(502) 564-8100	573
10	005	Legislative Resea	Strange	Joanna	joanna.strange@l	(502) 564-8100	373
20	025	Administrative Of	Sutherland	Rebecca	rebeccas@mail.a	(502) 573-2350	2042
31	035	Department of A	Mitchell	Glenn	glenn.mitchell@k	(502) 564-4696	275
31	040	Attorney General	Ellis	Tammy	tammy.ellis@ky.g	(502) 5696-5615	
31	045	Auditor of Public .	Hutchins	Tony	tony.hutchins@au	(502) 573-0040	304
31	066	Registry of Electi	Thomas	Joanna	jo.thomas@ky.go	(502) 573-2226	253
31	082	Kentucky Infrastr	Pitts	Denise	denise.pitts@ky.g	(502) 573-0260	225
31	089	Agricultural Deve	Hearn	William	bill.hearn@ky.gov	(502) 564-4627	228

Objects can be changed to *Detail* or *Measure Objects* if needed after the data is imported.

In the example to the right, *CAB* or *Cabinet* may be changed to a *Detail Object* if needed.

Also, *Objects* may be renamed once they are imported into the spreadsheet.



Data Manager

Data Providers

PD 1 in C:\Documents a

CAB, DEPT, NAME, LAST NAME, FIRST NAME, E-MAIL, PHONE, EXT

Data Description

Name: CAB

Type: Numeric

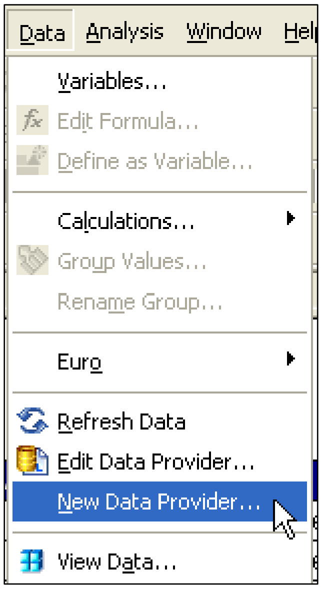
Qualification

This item has the following qualification for multidimensional analysis:

● Dimension ○ Measure ○ Detail

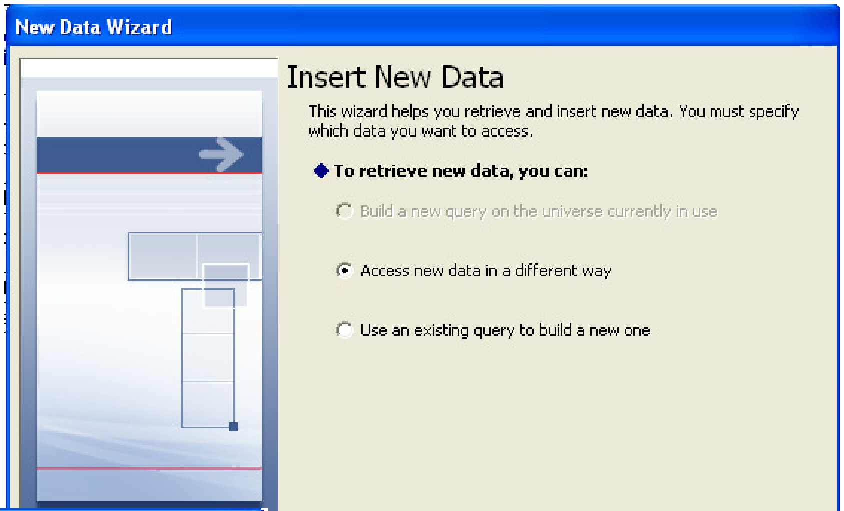
Values:
10
20
31

Once data has been imported, other data providers can be created and joined to the imported data. However, because *Business Objects* does not allow you to specify the type of join between objects, joining to other data providers may not give expected results. Returned data may be more than anticipated for the report.


Data
Analysis
Window
Hel
Variables...
Edit Formula...
Define as Variable...
Calculations...
Group Values...
Rename Group...
Euro
Refresh Data
Edit Data Provider...
New Data Provider...
View Data...

In this example, the *Chart of Accounts Universe* can be joined and we can pull in the *Cabinet Name*.

Select *Data* > *New Data Provider*.


New Data Wizard
Begin >
Cancel

Insert New Data

This wizard helps you retrieve and insert new data. You must specify which data you want to access.

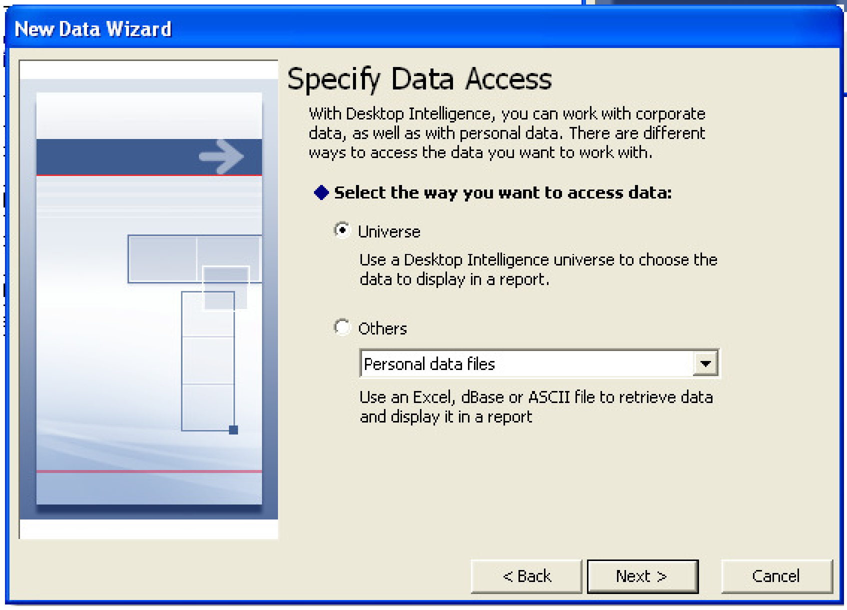
◆ **To retrieve new data, you can:**

○ Build a new query on the universe currently in use

● Access new data in a different way

○ Use an existing query to build a new one

Access new data in a different way should be selected and the click on *Begin*.


New Data Wizard
< Back
Next >
Cancel

Specify Data Access

With Desktop Intelligence, you can work with corporate data, as well as with personal data. There are different ways to access the data you want to work with.

◆ **Select the way you want to access data:**

● Universe

Use a Desktop Intelligence universe to choose the data to display in a report.

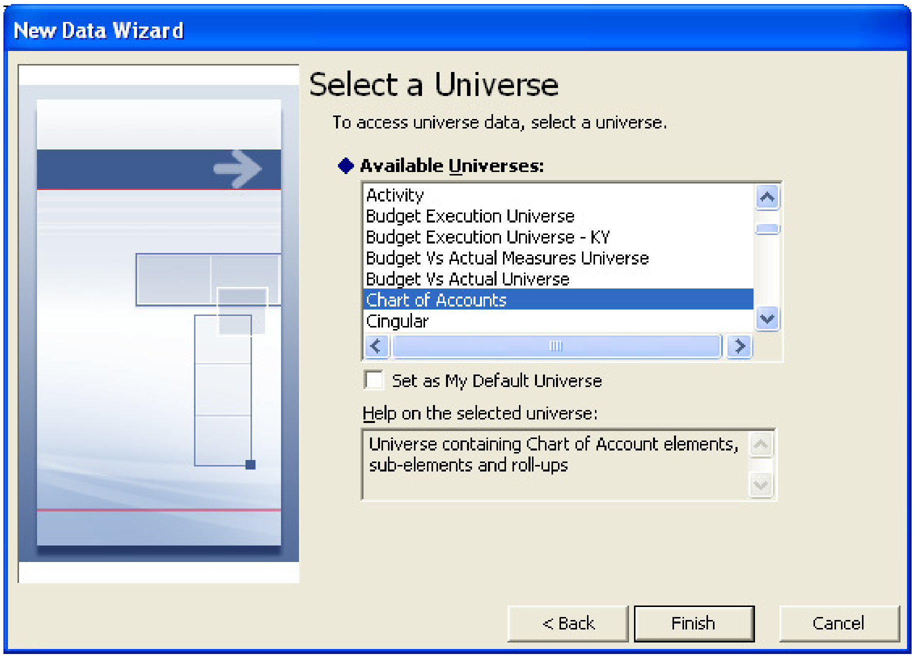
○ Others

Personal data files

Use an Excel, dBase or ASCII file to retrieve data and display it in a report

Select *Universe* and click on *Next*.

Select the *Chart of Accounts Universe* and click on *Finish.*



New Data Wizard

Select a Universe

To access universe data, select a universe.

◆ **Available Universes:**

- Activity
- Budget Execution Universe
- Budget Execution Universe - KY
- Budget Vs Actual Measures Universe
- Budget Vs Actual Universe
- Chart of Accounts
- Cingular

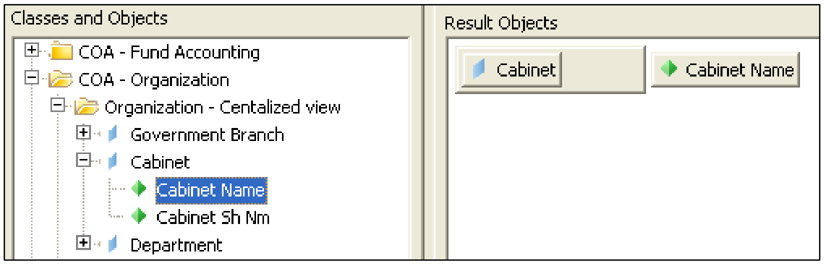
☐ Set as My Default Universe

Help on the selected universe:

Universe containing Chart of Account elements, sub-elements and roll-ups

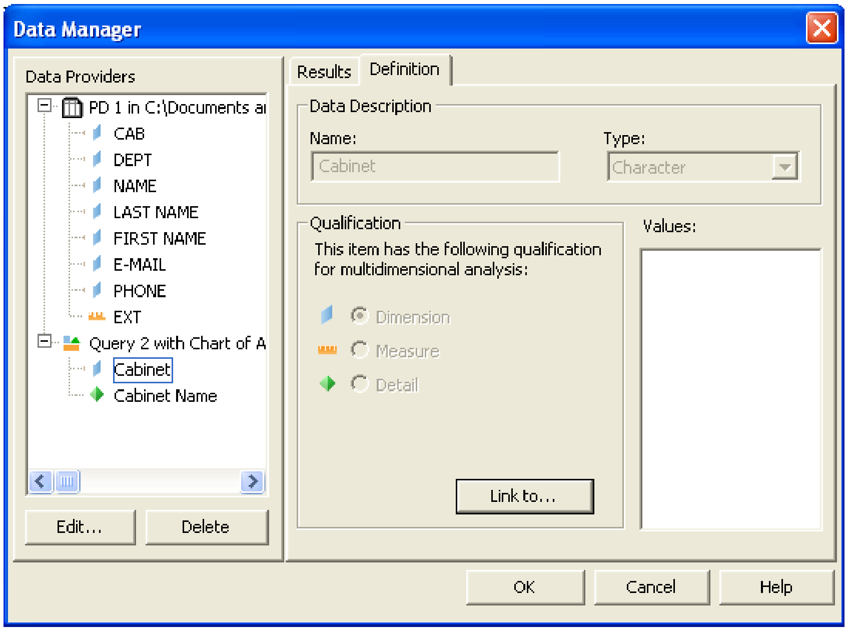
< Back
Finish
Cancel

Drag *Cabinet* and *Cabinet Name* into the *Result Objects* panel and *Save and Close.*



Classes and Objects
COA - Fund Accounting
COA - Organization
Organization - Centalized view
Government Branch
Cabinet
Cabinet Name
Cabinet Sh Nm
Department
Result Objects
Cabinet
Cabinet Name

In the *Data Manager*, link *Cabinet* from *Chart of Accounts* to *CAB* from the spreadsheet.



Data Manager

Data Providers
PD 1 in C:\Documents ar
CAB
DEPT
NAME
LAST NAME
FIRST NAME
E-MAIL
PHONE
EXT
Query 2 with Chart of A
Cabinet
Cabinet Name
Edit...
Delete
Results
Definition
Data Description

Name: Cabinet

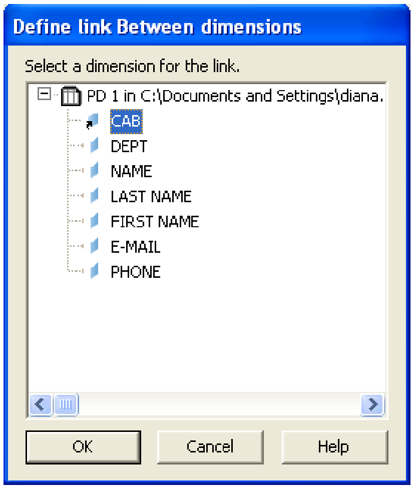
Type: Character

Qualification

This item has the following qualification for multidimensional analysis:

● Dimension
○ Measure
○ Detail

Values:
Link to...
OK
Cancel
Help



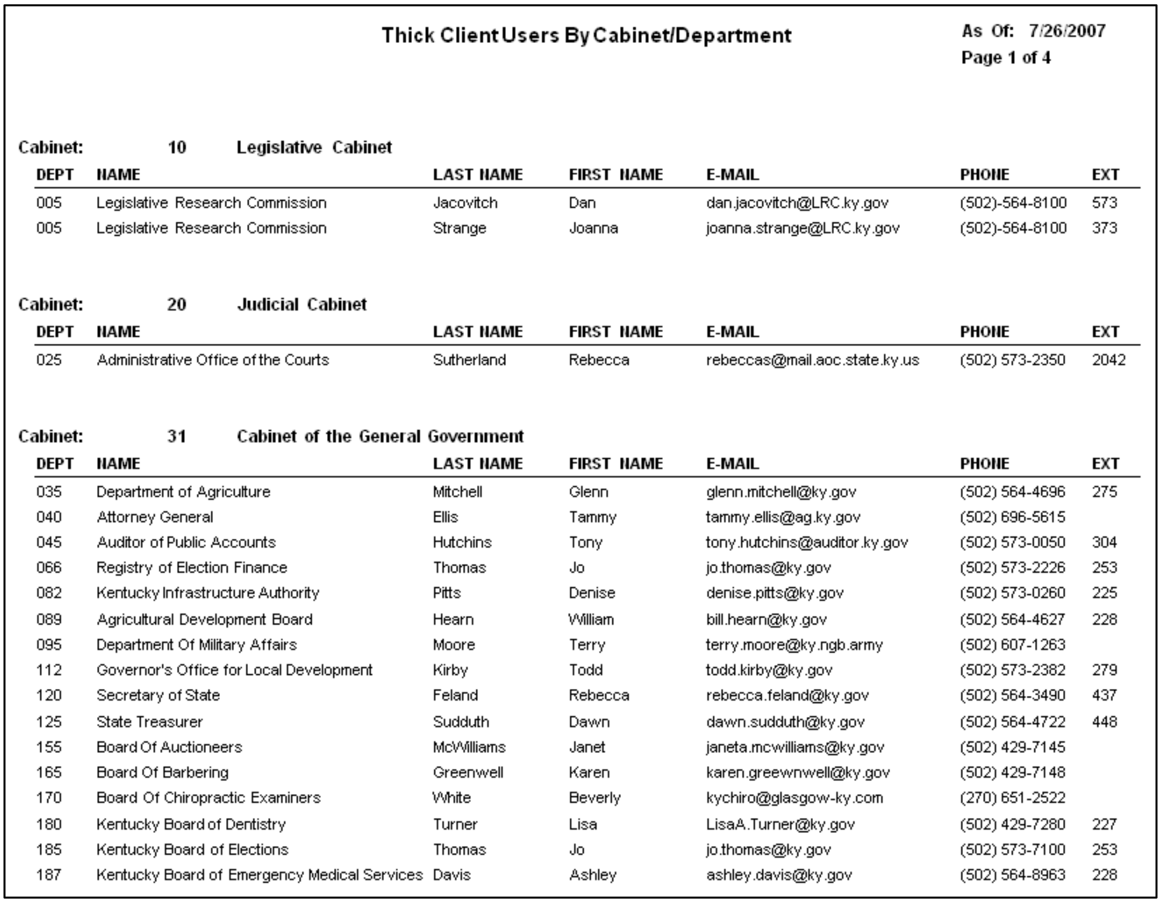
Define link Between dimensions

Select a dimension for the link.

PD 1 in C:\Documents and Settings\diana.
CAB
DEPT
NAME
LAST NAME
FIRST NAME
E-MAIL
PHONE
OK
Cancel
Help

After joining the *Objects* together, *Cabinet Name* can be added to the report.

The report below shows how you can create a section on *CAB*, include the *Cabinet* name and report *Thick Client Users By Cabinet/Department*.



Thick Client Users By Cabinet/Department

As Of: 7/26/2007
Page 1 of 4

Cabinet: 10 Legislative Cabinet

DEPT	NAME	LAST NAME	FIRST NAME	E-MAIL	PHONE	EXT
005	Legislative Research Commission	Jacovitch	Dan	dan.jacovitch@LRC.ky.gov	(502)-564-8100	573
005	Legislative Research Commission	Strange	Joanna	joanna.strange@LRC.ky.gov	(502)-564-8100	373

Cabinet: 20 Judicial Cabinet

DEPT	NAME	LAST NAME	FIRST NAME	E-MAIL	PHONE	EXT
025	Administrative Office of the Courts	Sutherland	Rebecca	rebeccas@mail.aoc.state.ky.us	(502) 573-2350	2042

Cabinet: 31 Cabinet of the General Government

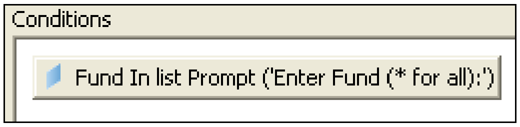
DEPT	NAME	LAST NAME	FIRST NAME	E-MAIL	PHONE	EXT
035	Department of Agriculture	Mitchell	Glenn	glenn.mitchell@ky.gov	(502) 564-4696	275
040	Attorney General	Ellis	Tammy	tammy.ellis@ag.ky.gov	(502) 696-5615	
045	Auditor of Public Accounts	Hutchins	Tony	tony.hutchins@auditor.ky.gov	(502) 573-0050	304
066	Registry of Election Finance	Thomas	Jo	jo.thomas@ky.gov	(502) 573-2226	253
082	Kentucky Infrastructure Authority	Pitts	Denise	denise.pitts@ky.gov	(502) 573-0260	225
089	Agricultural Development Board	Hearn	William	bill.hearn@ky.gov	(502) 564-4627	228
095	Department Of Military Affairs	Moore	Terry	terry.moore@ky.ngb.army	(502) 607-1263	
112	Governor's Office for Local Development	Kirby	Todd	todd.kirby@ky.gov	(502) 573-2382	279
120	Secretary of State	Feland	Rebecca	rebecca.feland@ky.gov	(502) 564-3490	437
125	State Treasurer	Sudduth	Dawn	dawn.sudduth@ky.gov	(502) 564-4722	448
155	Board Of Auctioneers	McWilliams	Janet	janeta.mcwilliams@ky.gov	(502) 429-7145	
165	Board Of Barbering	Greenwell	Karen	karen.greewnwell@ky.gov	(502) 429-7148	
170	Board Of Chiropractic Examiners	White	Beverly	kychiro@glasgow-ky.com	(270) 651-2522	
180	Kentucky Board of Dentistry	Turner	Lisa	LisaA.Turner@ky.gov	(502) 429-7280	227
185	Kentucky Board of Elections	Thomas	Jo	jo.thomas@ky.gov	(502) 573-7100	253
187	Kentucky Board of Emergency Medical Services	Davis	Ashley	ashley.davis@ky.gov	(502) 564-8963	228

Appendix P
User Created Prompts Using '*' for All

Predefined Filters have been the only way to allow users to input '*' into a prompt to retrieve all available records. When using *InList* in prompts, users still have to select all records they wish to return data for in the report. There is another way for users to create a prompt that will allow the use of '*' for *All Records*.

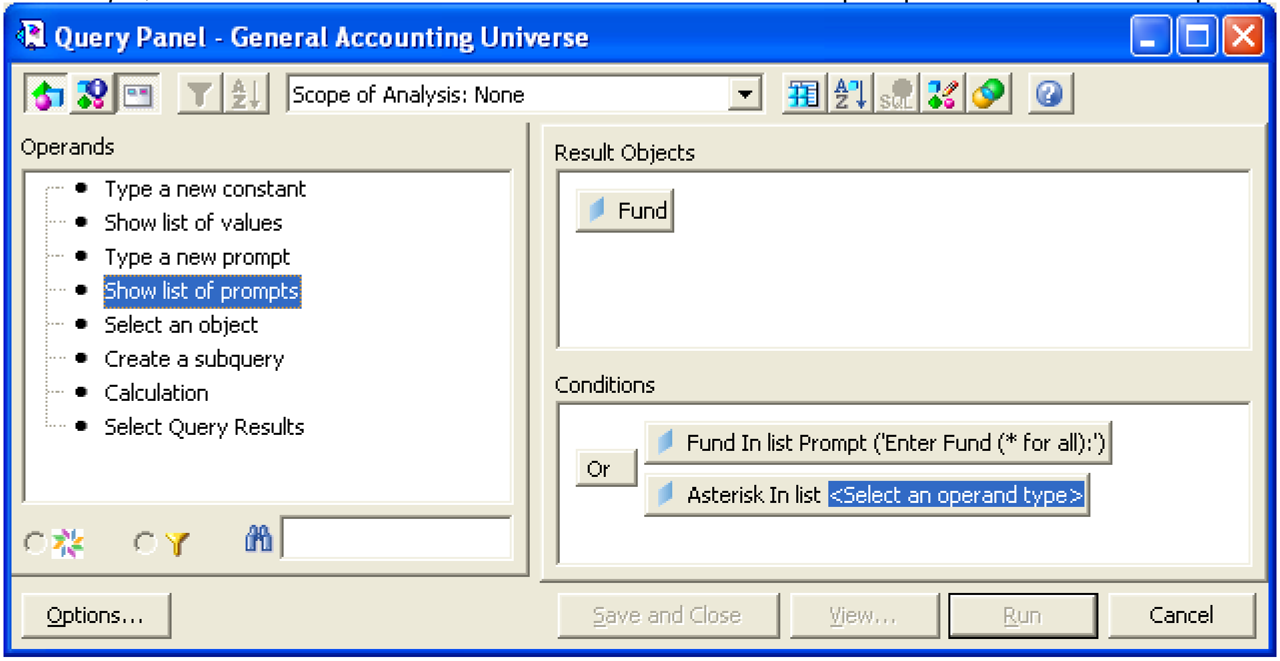
For example, if you create a report that allows users to pick the *Funds* they wish to see on their report, you may create a prompt that will allow them to input '*' to retrieve all *Funds* they have access to view instead of having to pick off the ones they wish to see.

In order to create a prompt that would allow a user to input '*', you first must create a prompt for *Fund* and then a prompt for *Asterisk*. To create a prompt for *Fund*, drag the *Dimension Object Fund* into the *Query Filters Panel*. You need to choose *InList* for the *Operator* and *Type a New Prompt*, as shown below. Whatever *Prompt Text* you decide to use for this prompt must be used for the *Asterisk* prompt as well.


Conditions

Fund In list Prompt ('Enter Fund (* for all):')

Next, a prompt must be created for *Asterisk*. The *Asterisk Dimension Object* may be found the *Class Created from User Objects*. Drag *Asterisk* into the *Query Filters Panel*. You need to choose *InList* for the *Operator* and *Show List of Prompts*, as shown below. Remember to use the choose the same prompt text used for the *Fund* prompt.


Query Panel - General Accounting Universe
Scope of Analysis: None
Operands
Type a new constant
Show list of values
Type a new prompt
Show list of prompts
Select an object
Create a subquery
Calculation
Select Query Results
Result Objects
Fund
Options...
Save and Close
View...
Run
Cancel

Conditions

Or

Fund In list Prompt ('Enter Fund (* for all):')

Asterisk In list <Select an operand type>

Be sure to use *Or* for your condition.

When you run your query, you will notice there is only one prompt. You may now input '*' to retrieve all *Funds* that you have security to view on your report.

In this instance, using the *Predefined Optional Fund Prompt* would also allow you to use '*' to retrieve all *Funds* and would save time because you wouldn't have to create two prompts. However, there could be an instance where there is no *Predefined Filter* available that uses '*'.

Note: Some of the Kentucky specific universes do not have the *Asterisk Dimension Object* so this would not be an option in some universes.

Appendix Q

#IERR Error Message in infoAdvantage Reports

When working with certain universes, it is possible that you could receive the ***#IERR*** error in your reports. To demonstrate this, we will build a simple *Cingular* report.

1. Click on ***File > New***.
2. When the *New Report Wizard* comes up, select the ***Cingular Universe***.
3. Select the following ***Dimension Objects*** from the specified ***Class***, then ***Run*** the report:

General Subscription Information Class:

Name

Air Detail Class:

Agency

Billing Date

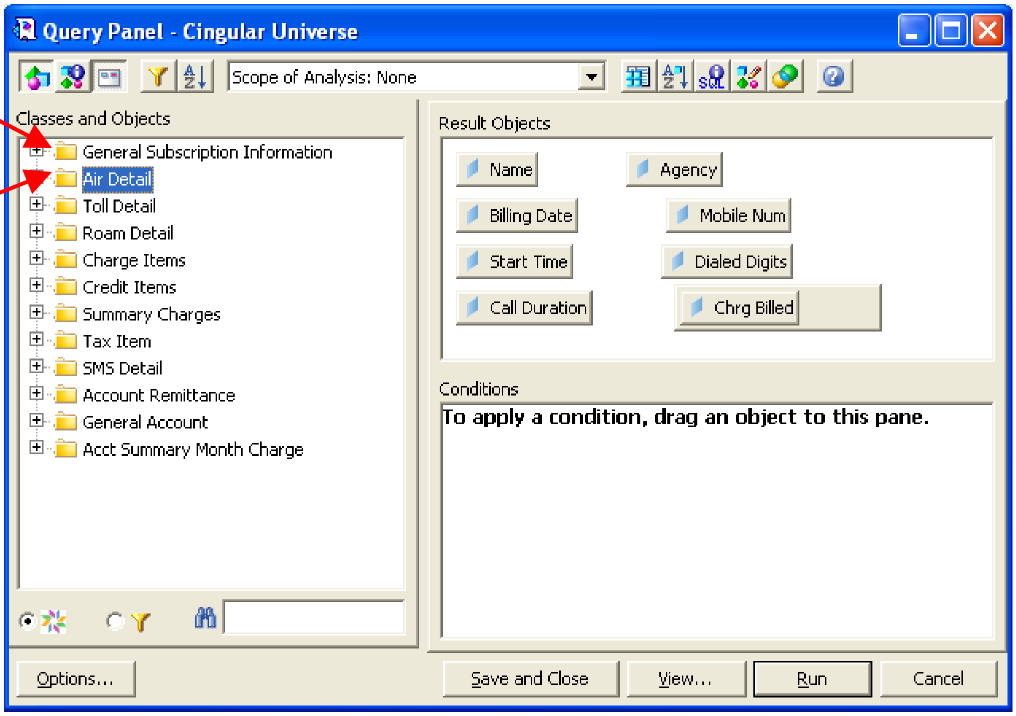
Mobile Num

Start Time

Dialed Digits

Call Duration

Chrg Billed


Query Panel - Cingular Universe
Scope of Analysis: None
Classes and Objects
General Subscription Information
Air Detail
Toll Detail
Roam Detail
Charge Items
Credit Items
Summary Charges
Tax Item
SMS Detail
Account Remittance
General Account
Acct Summary Month Charge
Result Objects
Name
Agency
Billing Date
Mobile Num
Start Time
Dialed Digits
Call Duration
Chrg Billed
Conditions
To apply a condition, drag an object to this pane.
Options...
Save and Close
View...
Run
Cancel

4. Add the following filters to the ***Conditions*** panel (to minimize the amount of data returned):

   ***Agency* is equal to 785**

   ***Billing Date* is less than 6/19/2006**

5. ***Run*** the report.
6. Create sections on ***Agency*** and ***Name*** to make the report easier to read.

If you notice, ***Call Duration*** actually needs to be modified to show minutes instead of seconds.

7. To convert ***Call Duration*** to minutes, click on the cell and create a formula:

   =<Call Duration>/60

8. To add a total for ***Call Duration***, first go to *Structure View*, and click on the **cell** for ***Call Duration***.
9. Next, click ***Insert Sum*** Σ.

After inserting the subtotal, exit *Structure View* and scroll down to view your results. You will notice an error message in the subtotal cell: **#IERR**. The error exists because the formula we used to calculate the subtotal for the minutes on ***Call Duration*** is incorrect.

We used the formula **=<Call Duration>/60** for the minutes. When we created a subtotal on this field, Desktop Intelligence used the formula **=Sum((<Call Duration>/60))**. ***Call Duration*** must *first* be summed, *then* divided by 60.

10. To fix the error, we simply need to **change the formula** for the subtotal cell. The new formula should look like:

    =Sum(<Call Duration>)/60

We simply need to sum the ***Call Duration*** and then divide by 60 to figure out the actual minutes. Once you change the formula, the error message goes away and is replaced by a value.

Appendix R
Cheat Sheet

FCT1_General_Ledger	General Accounting Universe				
Column	**Class1**	**Class2**	**Class3**	**Dimersion/Measure**	**Detail/Measure**
FISCAL_YEAR	Accounting Period			Fiscal Year	
FISCAL_QUARTER	Accounting Period			Fiscal Year	Fiscal Quarter
FISCAL_MONTH	Accounting Period			Accounting Period	
FUND	COA - Fund Accounting	Fund		Fund	
AGENCY	COA - Organization	Organization - Centralized view		Department	
ORGN	COA - Organization	Organization - Decentralized view		Unit	
ACTIVITY	COA - Detailed Accounting	Activity		Activity	
OBJECT	COA - Fund Accounting	Object		Object	
OBJECT_CLASS	COA - Fund Accounting	Object	Object Hierarchy	Object Class	
OBJECT_TYPE	COA - Fund Accounting	Object	Object Hierarchy	Object Type	
OBJECT_GROUP	COA - Fund Accounting	Object	Object Hierarchy	Object Group	
REVENUE_SOURCE	COA - Fund Accounting	Revenue		Revenue Source	
REVENUE_CLASS	COA - Fund Accounting	Revenue	Revenue Source Hierarchy	Revenue Source Class	
REVENUE_TYPE	COA - Fund Accounting	Revenue	Revenue Source Hierarchy	Revenue Source Type	
REVENUE_GROUP	COA - Fund Accounting	Revenue	Revenue Source Hierarchy	Revenue Source Group	
BALANCE_SHEET_ACCOUNT	COA - Fund Accounting	Balance Sheet Account		BSA	
ACCOUNT_TYPE	Posting Code			Closing Classification	
TRANSACTION_CODE	Accounting Journal	Accounting Journal Doc Info		Document Code	
TRANSACTION_AGENCY	Accounting Journal	Accounting Journal Doc Info		Document Department Code	
TRANSACTION_NUMBER	Accounting Journal	Accounting Journal Doc Info		Document ID	
RECORD_DATE					
LINE_NUMBER	Accounting Journal	Accounting Journal Doc Infp		Document Actg Line Number	

FCT1_General_Ledger	**General Accounting Universe**				
Column	**Class1**	**Class2**	**Class3**	**Dimersion/Measure**	**Detail/Measure**
ACCEPTANCE_DATE	Accounting Journal	Posting Details		Document Record Date	
BATCH_DATE	N/A				
BATCH_NUMBER	N/A				
BUDGET_FISCAL_YEAR	Budget Fiscal Year			BFY	
ALLOTMENT_PERIOD					
TERMINI					
DOCUMENT_ACTION					
LINE_ACTION					
TYPE_OF_ORDER					
VENDOR_NUMBER	Accounting Journal	Vendor Information		Vendor Code	
VENDOR_ADDRESS_IND	N/A				
NAME	Accounting Journal	Vendor Information		Vendor Legal Name	
VENDOR_INVOICE	Accounting Journal	Vendor Information		Vendor Invoice Number	
DESCRIPTION	Accounting Journal	Posting Details		Accounting Line Description	
SUB_ORGN	COA - Organization	Organization - Decentralized view		Sub-unit	
APPROP_PROGRAM	COA - Detailed Accounting	Function	Function Hierarchy	Function Group	
ALLOT_PROGRAM	COA - Detailed Accounting	Function	Function Hierarchy	Function Type	
PROG_BUDGET_UNIT	COA - Detailed Accounting	Function		Function	
SUB_OBJECT	COA - Fund Accounting	Department Object		Department Object	
SUB_REVENUE_SOURCE	COA - Fund Accounting	Department Revenue		Dept Revenue Source	
JOB_NUMBER	COA - Cost Accounting	Task		Task	
REPORTING_CATEGORY	COA - Detailed Accounting	Reporting		Reporting	
APPLICATION_TYPE					
BANK_ACCOUNT_CODE	Bank			Bank Account	
R_TRANSACTION_CODE	Accounting Journal	Accounting Journal Ref Doc Info		Document Code	
R_TRANSACTION_AGENCY	Accounting Journal	Accounting Journal Ref Doc Info		Document Department Code	
R_TRANSACTION_NUMBER	Accounting Journal	Accounting Journal Ref Doc Info		Document ID	
R_LINE_NUMBER	Accounting Journal	Accounting Journal Ref Doc Info		Document Actg Line Number	
UNITS	N/A				

FCT1_General_Ledger	**General Accounting Universe**				
Column	**Class1**	**Class2**	**Class3**	**Dimersion/Measure**	**Detail/Measure**
LINE_AMOUNT	Accounting Journal			Pstng Amount	
DEBIT_CREDIT_CODE	Accounting Journal	Posting Details		Debit/Credit Flag	
STATUS					
POST_CODE					
APPROP_ORGN	not available				
ALLOT_ORGN	not available				
EXPENSE_BUDGET_ORGN	not available				
REVENUE_BUDGET_ORGN	not available				
FEDERAL_AID_NUMBER	N/A				
CHARGE_CLASS	N/A				
PROJECT	COA - Cost Accounting	Major Program	Program	Program Code	
SUB_PROJECT	N/A				
PHASE	COA - Cost Accounting	Major Program	Program Phase	Phase Code	
CASH_CONTROL_FLAG	N/A				
COST_CATEGORY	N/A				
FUNCT	COA - Detailed Accounting	Location		Location	
QUANTITY	N/A				
BILLING_CODE	N/A				
DW_NUMBER	N/A				
DW_UPDATE	N/A				
INTRA_GOVT_REF_FUND					

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Appendix S
Review Answers

Exercise 1: Creating a Report

1) The data warehouse reflects data from

a) The current business day

[✓ **b) The previous business day**]

2) You have **3** tries to log in to Desktop Intelligence before your account is locked out. **Email** the CRC to have your account unlocked.

3) What is a *Universe*? **A universe is a database interface that maps objects to fields in a database on a grouping of tables. It provides an easy to use interface for users to run queries against a database to create reports and perform data analysis.**

4) A universe is a collection of ***Universe Objects***, which represent fields in a database.

5) Classes are **logical groupings** of *Universe Objects*.

6) Name the three different types of *Universe Objects*:

a) ***Dimension Object***

b) ***Detail Object***

c) ***Measure Object***

7) ***True*** or [✓ ***False***] Drag the folder of the object you want into the *Result Objects Panel.*

If you drag the entire folder, all the objects in that folder will be moved to the *Result Objects Panel*.

8) When building a condition in a query, you need to

a) Find the object you wish to build a condition on.

b) Drag the object to the *Conditions Panel*.

c) Select the *Operator* from the list of *Operators*.

d) Select the *Operand* from the list of *Operands.*

9) Name the 4 most used icons in the *Report Panel*

a) ***Report Manager***

b) ***Refresh***

c) ***Edit Data Provider***

d) ***Data Manager***

Exercise 2: Using Formulas and Variables

1) Name four *Simple Calculations*:

a) ***Insert Sum***

b) ***Insert Percentage***

c) ***Insert Count***

d) ***Ranking***

2) What is the difference between *Count* and *Count All*?

Count:	**Will count all rows for a *Measure Object* but only distinct values for a *Dimension or Detail Object.***
***Count All*:**	**Will count the number of rows on the report including all duplicate and empty rows.**

3) Ranking enables you to **look at the largest and smallest values in a report.**

4) Name the four steps involved in creating an *Alerter.*

a) **Select the data.**

b) **Name and describe the alerter.**

c) **Set the conditions.**

d) **Set the formatting.**

5) A *Variable* is simply **a named *Formulas***.

6) What are the benefits of using *Variables* instead of inserting a *Formula* into a cell?

Because *Formulas* can be complex, naming a *Formula* allows us to refer to the *Formula* by name instead of working with the entire *Formula*.

7) What are the three steps to building a *Variable*?

a) **Name it.**

b) **Qualify it.**

c) **Define it.**

Exercise 3: Applying Simple Formatting

1) ***True*** or ***False*** Double-clicking on a cell will resize the cell to the smallest text in the cell.

It will resize to the largest text in the cell.

2) ***True*** or ***False*** If text exceeds a column width, there is no way to fit the content on one line without widening the cell.

You may use *Text Wrapping* to get the content to fit on one line.

3) *Row by Row Auto Fit* will **cause the height of each row to increase only if the text for that row has multiple lines**.

4) What are the four areas available to you on the border tab?

a) **Preset**

b) **Border**

c) **Style**

d) **Color**

5) On the *Number* tab, *Category* allows **you to choose the type of formatting**, *Format* allows **you to choose how you want the *Category* formatted**, and *Properties* allows **you to make custom changes to the *Format* you selected**.

6) One way to align the edges of several elements on a page is to use the ***Show Grid*** option.

7) Name two other options, other than the option in *Question Six,* that helps with alignment.

a) ***Align Elements***

b) ***Relative Position***

8) *Relative Position* allows you to **specify the location of a cell or a table/block relative to another cell or table/block**.

Exercise 4: Building a Crosstab Report

1) Crosstabs are a **process** or **function** that **combines** and/or **summarizes** data from one or more sources into a **concise format for analyzing a report.**

2) A crosstab is the **cross referencing or comparison of two variables to determine how they are interrelated**.

3) In the *New Crosstab Wizard*, what are the four options for displaying a new crosstab?

- a) **Use existing data from the document.**
- b) **Build a new query on the universe currently in use.**
- c) **Access new data in a different way.**
- d) **Use an existing query to build a new one.**

4) In order to show the *Difference* of two columns in a crosstab, what steps must be taken?

Create variables to represent the objects you wish to see the difference between. Insert a sum into the crosstab. Change the Sum column to subtract the two variables to show the difference.

Exercise 5: Using Sections

1) The tables in a section only **display the data relevant to the *Dimension Object*** on which the section was created.

2) Name two methods of creating sections.

- a) **Drag object from table above the table.**
- b) **Drag object from *Report Manager* above the table.**

3) When you move a *Master Cell* outside of its section, **DO NOT delete the section**.

4) How can you easily change the sectioned object to a different object?

***Format Section* and Click on *Change* in *Master Section*. Select new object to section on.**

5) How do you get totals for sections outside the *Lowest Level Section*?

Copy the table into each *Section Footer*. Hide the *Table Header* and *Fold* data to only show the *Table Footer* totals.

6) How do you correct the ***#Multivalue*** errors in cells in the *Report Header*?

To correct the *#Multivalue* error in a cell, use either the *Min()* or *Max()* function to return only one value of *Dimension* or *Detail*

7) *Slice* and *Dice* mode enables you to **switch the position of data in a report; display and remove data; rename, reset and delete blocks; turn tables and cross tabs into charts and vise versa; and apply, edit and delete breaks, filters, sorts, rankings and calculations**.

8) *Slice* and *Dice* provides a **geographical representation** of the report you are working on.

Exercise 6: Using Breaks

1) When does a ***#COMPUTATION*** error occur when running a report?

   A *#COMPUTATION* error may occur when you use a *Variable* in a report and one of the objects in the *Formula* of the *Variable* is not in the report table.

2) What is a break?

   A break is a division in a table in which data is grouped into parts according to a selected value.

3) Why are breaks advantageous?

   Breaks are advantageous because they allow you to display subtotals in an efficient way to organize how our data is represented.

4) Name the three ways to insert a break..
   a) ***Insert Break* button**
   b) **Right Click on field and choose *Insert Break***
   c) **Click on *Format* on the menu bar and then *Breaks* to *Add* a break.**

5) Name the four ways to total breaks.
   a) **Right Click and select *Calculations > Sum***
   b) ***Insert Sum* on *Measures Toolbar***
   c) **Click on cell and type *Sum()* around each variable in *Formula Bar***
   d) **Add *Sum()* using *Formula Editor***

Exercise 7: Joining Multiple Data Providers

1) Linking *Data Providers* enables **data from different *Data Providers* to be computed in the same table**.

2) Name two methods of joining *Data Providers.*

  a) **Completely build each query in each *Data Provider* and then manually link or join objects in *Data Manager*.**

  b) **Build one query with only *Dimension* objects in the *Result Objects Panel*, *Save and Close* the query and then build additional *Data Providers* using the "*use an existing query to build a new one"* option in the *New Data Wizard*.**

3) What does *Context of Query* mean?

Because of the way joins are set up behind the scenes in the universes, if a query is unsure of which table to pull the information from, you will get the message box and have to tell the query where to retrieve the data.

4) What are two ways to tell if an object is linked to another object(s)?

  a) **When you Click on an object, there will be an arrow beside it.**

  b) **The *Link/Unlink* icon will show *Unlink*.**

5) In a table you may have the following:

  a) **Linked *Dimension Objects* from one or both *Data Providers*.**

  b) **Unlinked *Dimension Objects* from one *Data Provider*.**

  c) ***Detail Objects* from one or both *Data Providers* if the *Detail Object* is associated with a linked *Dimension Object.***

  d) ***Measure Objects* from one or both *Data Providers*.**

6) **True** or [✓ **False**]   Detail Objects must be joined.

You can not join *Detail Objects*, only *Dimension Objects*.

Appendix T
Additional Resources and Statewide Report Requests

Where Do I Go for Help?

Please contact the Customer Resource Center (CRC) anytime you need help with InfoAdvantage. The CRC staff will work with you in collecting the needed information and log a help desk case. The case will be routed to the appropriate support resource. In an effort to speed up the response time of your requests, here are a few tips on the types of information that will help CRC staff and/or the support resources in addressing your request.

Basic Information needed for all InfoAdvantage Cases

- Department Name and Department Number
- User's EMARS ID
- Case details (include descriptive information explaining the nature of the problem or request).

Report Cases (on existing reports – i.e. questions, problems, enhancements)

- Identify type of report if known (i.e. InfoAdvantage Webi, Business Objects Desktop Intelligence, etc)
- Identify Report Name (include complete report name and number if available)
- Provide Report Location within InfoAdvantage (folder name)
- Identify if report is a Statewide standard or Department custom report
- For all Departmental customized reports, users should contact their report developers prior to contacting the CRC for assistance.

New Statewide Report Needed

- Provide a purpose statement or objective (what is the overall purpose for the report)
- Identify your report audience
- Provide a report name and any other identifying information needed
- Identify if detail or summary level information is needed
- List all universes/classes/sub-classes you need information from
- Include all Dimension or Detail Objects and Measures needed in the report
- Define any data grouping needed (i.e. by department, fund)
- Define sub-totals and grand-totals needed
- Define any formulas/variables needed (where possible, i.e. calculated fields)
- Identify if your data needs to be year-to-date (YTD) or daily
- Identify if YTD totals for FY or calendar year
- Identify parameter fields needed (i.e. accounting period, fiscal year)

Request Access to a New or Existing Data Warehouse View

ALL Requests for access to the Data Warehouse Views will be reviewed and granted depending on the conditions prompting the request. If your request can be done using InfoAdvantage or Business Objects, your request for access to the views will be denied.

For access to Existing Data Warehouse Views:

- Provide a purpose statement or objective (what is the overall purpose for the access)
- **Please state why this can not be accomplished using InfoAdvantage or Business Objects**

For requests for creation of New Data Warehouse Views.

- Identify your view audience
- Identify if detail or summary level information is needed
- List all tables you need information from
- Include all fields needed in the view
- Provide any selection criteria to be applied to the view (i.e., specific department, fund)

Your Help Desk Case will be assigned to the appropriate InfoAdvantage resource who will contact you as needed to resolve your case.

Sharing Custom InfoAdvantage Report Designs Across Agencies

InfoAdvantage is a tool that assists agencies in designing custom reports. In sharing these custom report designs across departments several things can be achieved. Just to name a few:

Duplication of efforts can be reduced. (Helps prevent reinventing the wheel)

Report design knowledge can be transferred among the report designers (formerly referred to as Power Users)

By reviewing other designer's report layouts, designers can learn different approaches and techniques.

If you have designed a report that may be beneficial to other departments or if you are in need of a specific type of report, the CRC would like to encourage you to make use of the two email distribution lists available through Outlook: *eMARS Report Developers* & *eMARS Thick Client Users*. You may utilize these email distribution lists by sending out emails notifying others of various reports you may have created that you feel others may benefit from, of any reporting tips or tricks you may have uncovered, or to request assistance from other report developers.

If you have created a custom report that you feel would have benefits on a Statewide level, you may submit your custom report for review to the Customer Resource Center (CRC) by phone (502)-564-9641 or toll free (877)-973-HELP) or email (**Finance.CRCGroup@mail.state.ky.us**).

All shared custom reports will need to go through a review process to validate the report for statewide application prior to moving the report to a shared statewide location. Once you have contacted CRC, Help Desk staff will log the Report Name and where the report is currently saved within InfoAdvantage so the review process can begin.

If you are not a Report Designer (formerly know as a "Power User") and wish to use another Department's report, you can:

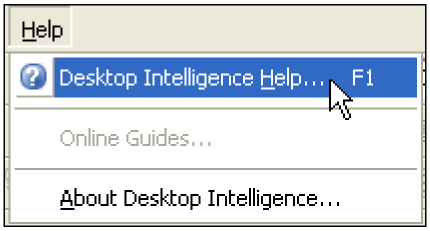
Contact your department Report Designer and request that the report be moved to your departments folder location within InfoAdvantage that you have access to; or,

Have the other Department's Report Designer send their report to your infoAdvantage inbox for your personal use.

Additional Resources

Some additional resources for obtaining help with Business Objects Desktop Intelligence:

Within Desktop Intelligence, under *Help*, is *Desktop Intelligence Help*. There are several other resources that provide information that will help you with building reports in Desktop Intelligence.


Help
Desktop Intelligence Help... F1
Online Guides...
About Desktop Intelligence...

http://finance.ky.gov/internal/eMARS/reports.htm

The eMars website under the *Reporting* link offers a link to the *infoAdvantage Universes and Reports Guide* that provides a listing of the universes that are available and what classes they consist of.